8 7860-1

UNL News
Vol. 59 No. 8 October, 1979 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May, Aug., Oct., Nov., and Dec., and 3 times in Jan., Feb., Mar., April, and Sept. by the University of Nebraska-Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

A NEBRASKA STOCK PRICE INDEX

The relationship between the stock market and our nation's economy has been the subject of much research in the past two decades. Early studies indicated that, on the average, stock prices turned downward prior to business cycle peaks and hit a trough prior to a trough in business activity.[1] Douglas Caves and Edgar Feige have recently introduced an Efficient Markets Information Theory (EMIT) model to explain the relationship between the stock market and economic activity.[2] The theory suggests that informed market participants observe a myriad of shocks to the economic system, such as political and economic announcements of oil embargoes or tax reform. In an efficient market such information is assessed and acted upon, being ultimately reflected in market prices. Thus, since prices reflect important economic information, they can be used to improve forecasts of economic activity.

Empirical research has provided support for the EMIT model. The U.S. Department of Commerce index of 500 common stocks has a "long record of serving well as a leading indicator of business recessions and recoveries. Stock price changes both mirror and affect the general state of expectations and they have rarely failed to anticipate any of the major cyclical movements in the economy."[3]

Much of the research done by economists in their search for predictors of future levels of economic activity has been done on a national level. There is, however, a definite need for economic forecasting on the state level as well. It is the purpose of this article to report on the development of an index of stock prices for the state of Nebraska and evaluate its potential usefulness as a leading indicator of the future course of the Nebraska economy.

CONSTRUCTION OF THE NEBRASKA STOCK PRICE INDEX (NSPI)

The usefulness of a good market index depends on the degree to which one may confidently infer movements in prices of the entire population of stocks from movements in the index. For this reason the sample is an important consideration in the construction of an index. A sample should not be an insignificant fraction of the population nor should it be so large that it would be costly to compile. A sample should also contain heterogeneous elements representative of the entire population.

The sample chosen for the NSPI is comprised of the stocks of thirteen companies which are either based in Nebraska or do a substantial portion of their business in the state. The companies are:

Carpenter Paper Company of Nebraska
Commerce Group, Inc.
ConAgra, Inc.
First National Lincoln Corporation
Iowa Beef Processors, Inc.
Kansas Nebraska Natural Gas Company, Inc.
Lincoln Telephone and Telegraph Company
Northern Natural Gas Company
Omaha National Corporation
Pacesetter Building Systems, Inc.
Pamida, Inc.
Union Pacific Railroad
Valmont Industries, Inc.

The sample is relatively small, but it includes several important Nebraska industries, both large and small.

The study of growth patterns in the economy and measurement of business cycles is best accomplished using a market value weighted stock price index. However, it was decided that an equally weighted index would best suit the present study for the Nebraska index. First, the stocks of most Nebraska companies are primarily traded locally, over-the-counter, and market information is not easily obtainable for these companies in brokerage houses across the nation. Second, the market values of the companies comprising the sample are too diverse to weight the price by the number of shares outstanding. For example, on December 31, 1977, Carpenter Paper had over 500,000 shares outstanding at roughly $13 per share. Union Pacific, selling at approximately $50 per share, had over 46 million shares outstanding. The difference in market value was $6.5 million for Carpenter Paper compared to $2.3 billion for Union Pacific. Union Pacific would be weighted 350 times more heavily than Carpenter Paper if outstanding shares were used.

The model chosen for the Nebraska Stock Price Index is patterned after a stock price index developed by Jeffrey Chandler and John Legler for the state of Georgia.[4] Equal weight is given to each stock in the sample, so equal

(Continued on page 2)

---

[1] Beryl Sprinkel, *Money and Markets: A Monetarist View* (Homewood, Illinois: Richard D. Irwin, Inc., 1971).

[2] Douglas W. Caves and Edgar Feige, "Efficient Markets, Stock Returns, the Money Supply and the Economy: Which Tail Wags the Dog?" (University of Wisconsin-Madison, Working Paper).

[3] Victor Zarnowitz and Charlotte Boscham, "Cyclical Indicators: An Evaluation and New Leading Indexes," *Business Conditions Digest*, May, 1975, p. *IX*.

[4] Jeffrey Chandler and John Legler, "The Georgia Stock Price Index," *Georgia Business*, January/February, 1978, pp. 1-5.

(Continued from page 1)

percentage price changes have an identical effect on the index.

All indexes require a base period. For the Nebraska index, 1976 was selected as the base period. This year was arbitrarily assigned a value of 100 for purposes of index construction. During this year the rate of economic growth was near its long-term trend rate. For this reason, 1976 is superior to previous years characterized by severe recession or high levels of prosperity, years which would not serve as an adequate base period.

Closing stock prices for the thirteen companies sampled were collected for the last Friday of each quarter beginning in 1976 and ending with the second quarter of 1979. Small stock dividends of 10 percent or less were ignored, since their effect on price is negligible. Adjustments were made for stock splits to maintain continuity in the index.

THE NEBRASKA STOCK PRICE INDEX COMPARED WITH NATIONAL INDEXES

The calculated values for the Nebraska Stock Price Index are shown in the first column of Table 1. It is interesting to compare the NSPI with several major market indexes to see how closely movements in Nebraska stocks follow the national markets. The relationship is illustrated in Table 1 and Figure 1.

It appears that of the four national indexes—the Over-the-Counter Index, the American Stock Exchange Index, the Dow Jones Composite Index, and the Standard & Poors Composite Index—the NSPI most closely follows the Over-the-Counter and American Stock Exchange indexes. This is not surprising, since the majority of stocks in the NSPI are traded over-the-counter. The NSPI is similar to the American Stock Exchange Index in that both are equally weighted indexes based on price changes. The other indexes are calculated in a different manner.

The downward trends in the Dow Jones Composite are inconsistent with the upward trend of the NSPI. One explanation of this divergence may be that a neglected group of stocks in the "lower market tier" (where most Nebraska stocks are located) have outperformed the favorite blue chips in the "upper tier" which comprise the Dow Jones and Standard & Poors indexes.

THE NEBRASKA STOCK PRICE INDEX AND STATE ECONOMIC PERFORMANCE

In an effort to determine the predictive validity of the Nebraska Stock Price Index for forecasting state economic activity, the stock index was plotted against several key economic variables. It has been hypothesized that movements in stock price indexes sometimes foretell movements in

(Continued on page 6)

Table 1

NEBRASKA STOCK PRICE INDEX
COMPARED WITH THE NATIONAL INDEXES*
(Index Value Followed by Percent Change)

		Nebraska Stock Price Index		Over-the Counter Index		American Stock Exchange Index		Dow Jones Composite		Standard & Poors Composite	
1976	I	100.00	---	90.62	---	103.95	---	304.01	- - -	102.77	---
	II	103.31	3.31%	90.32	-.33%	105.32	1.32%	310.94	2.28%	104.28	1.47%
	III	100.61	-2.61	91.26	1.04	101.95	-3.20	310.74	-.06	105.24	.92
	IV	105.68	5.04	97.88	7.25	109.84	7.74	325.49	4.75	107.46	2.11
1977	I	115.41	9.21	94.13	-3.83	111.17	1.21	303.24	-6.84	98.42	-8.41
	II	122.23	5.91	99.73	5.95	120.32	8.23	312.31	2.99	100.48	2.09
	III	120.28	-1.60	100.85	1.12	118.88	-1.20	290.61	-6.95	96.53	-3.93
	IV	119.39	-.74	105.05	4.16	127.89	7.60	287.17	-1.18	95.10	-1.48
1978	I	119.17	-.18	106.20	1.09	128.94	.82	266.94	-7.04	89.21	-6.19
	II	135.46	13.67	120.30	13.28	145.55	12.88	282.67	5.89	95.53	7.08
	III	140.75	3.91	132.89	10.47	168.81	15.98	300.45	6.29	102.54	7.34
	IV	134.51	-4.43	117.98	11.22	150.56	-10.81	272.20	-9.40	96.11	-6.27
1979	I	148.01	10.04	131.76	11.68	179.70	19.35	292.37	7.41	101.59	5.70
	II	149.51	1.01	138.13	4.83	200.76	11.72	294.97	.89	102.91	1.30

---

*Prices of the national indexes are closing prices on the last trading day of each quarter.

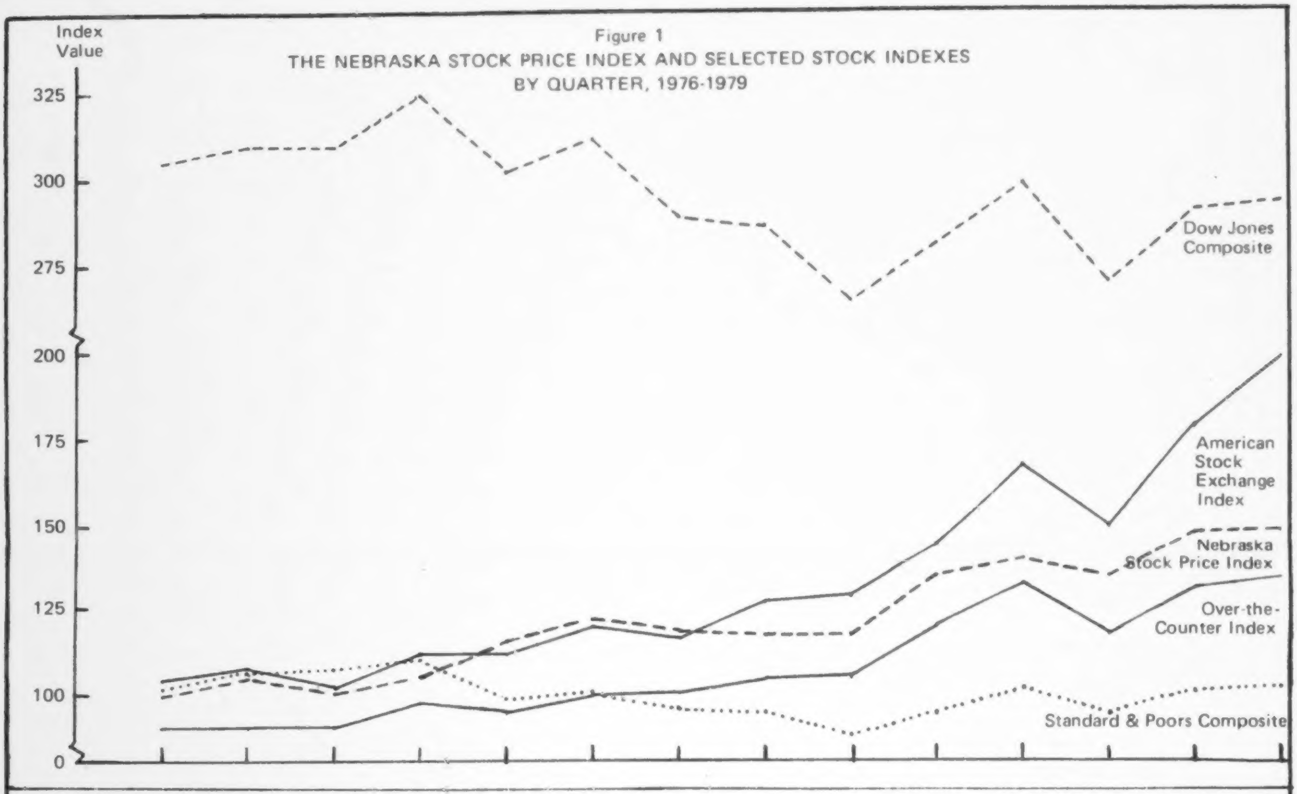


Figure 1
THE NEBRASKA STOCK PRICE INDEX AND SELECTED STOCK INDEXES
BY QUARTER, 1976-1979

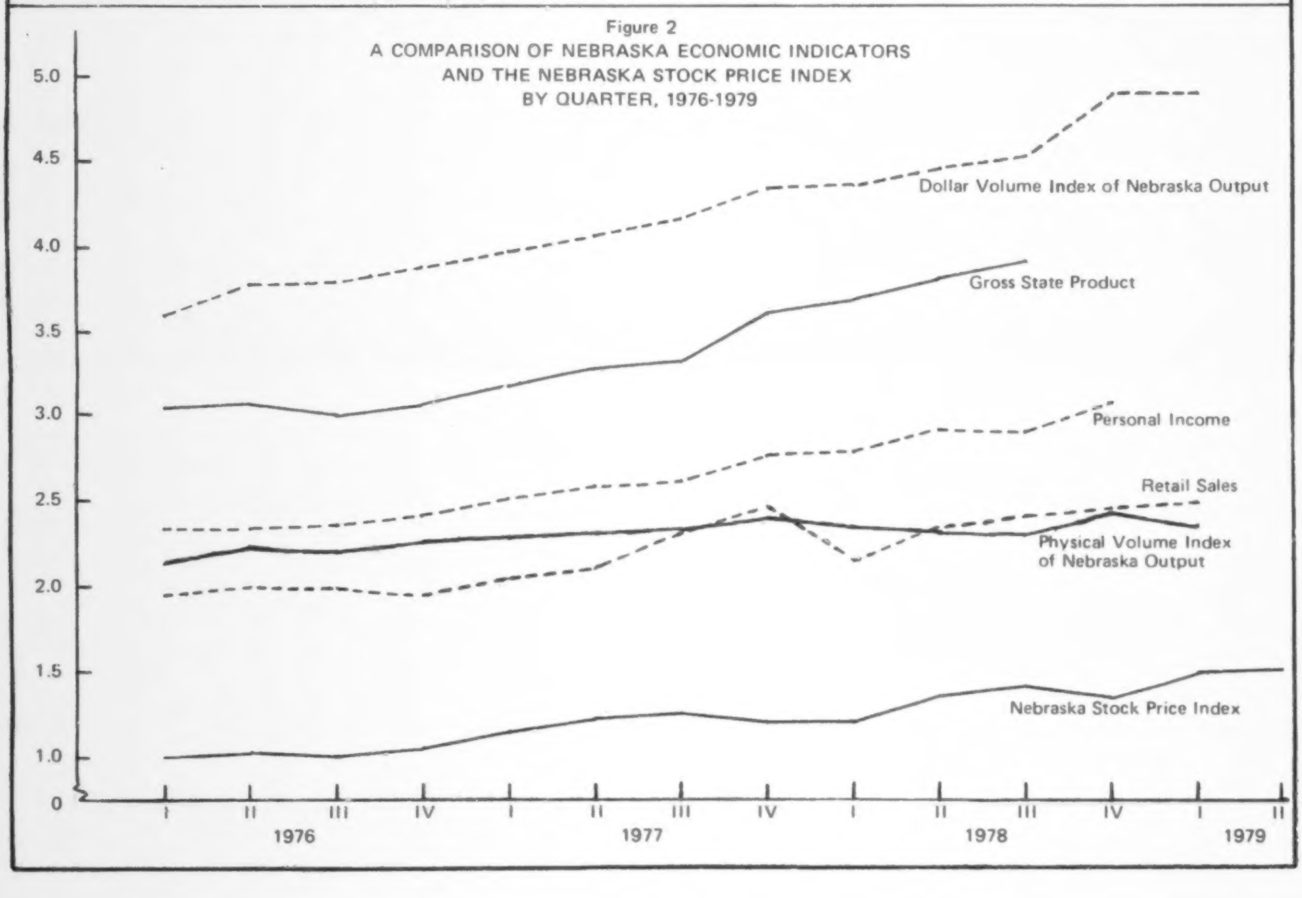


Figure 2
A COMPARISON OF NEBRASKA ECONOMIC INDICATORS
AND THE NEBRASKA STOCK PRICE INDEX
BY QUARTER, 1976-1979

Review and Outlook

Nebraska's real output decreased in June, with the physical volume index for the state recording a loss of 0.5 percent. The May-to-June decrease followed three consecutive monthly increases and resulted in an index value which was 46.2 percent above its 1967 base-period level. Compared to its level of June, 1978, the index experienced a 3.0 percent increase.

This month's decrease in economic activity was concentrated in the nonagricultural sectors, where the index was down 1.1 percent. This marked the first loss in activity since January. Manufacturing, with an increase of 0.4 percent, was the only nonagricultural sector reporting an increase. The decreases in the other nonagricultural sectors were: government, -0.2 percent; distributive, -1.8 percent; and construction, -2.4 percent.

The agricultural sector recorded a May-to-June increase in activity of 3.2 percent. Although this was the fourth consecutive monthly increase for this sector, June's index—as measured by seasonally adjusted cash farm marketings, expressed in real terms—was still below the record level of December, 1978. In June, prices received by Nebraska farmers fell 0.4 percent. Prices have been falling during the last three months, but remain 20.2 percent above those in June, 1978.

June marked the end of the second quarter of 1979, bringing with it the ominous signs of a recession at the national level. The Bureau's physical volume index

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

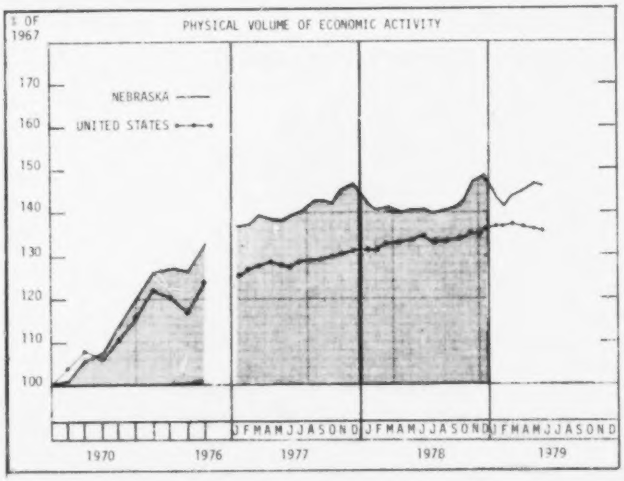
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

June, 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	115.8	111.8	114.6	113.3
Agricultural	149.7	122.8	127.7	125.8
Nonagricultural	111.2	111.4	112.6	112.9
Construction	98.8	107.4	102.4	113.5
Manufacturing	116.1	115.4	118.2	116.9
Distributive	110.2	110.6	112.1	112.0
Government	113.5	107.4	110.6	107.5
Physical Volume	103.0	101.1	101.9	102.6
Agricultural	124.5	109.4	102.1	105.3
Nonagricultural	100.2	100.8	101.9	102.6
Construction	87.6	95.3	89.8	99.5
Manufacturing	105.1	104.0	106.8	105.9
Distributive	99.4	99.7	101.6	101.6
Government	100.8	100.3	99.7	100.5

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	327.9	297.7
Agricultural	342.7	322.0
Nonagricultural	325.4	296.9
Construction	331.2	276.1
Manufacturing	367.6	293.4
Distributive	316.8	305.0
Government	299.8	279.2
Physical Volume	146.2	135.8
Agricultural	140.4	135.3
Nonagricultural	147.2	135.9
Construction	125.0	104.2
Manufacturing	161.2	129.8
Distributive	146.2	140.8
Government	139.8	141.6



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

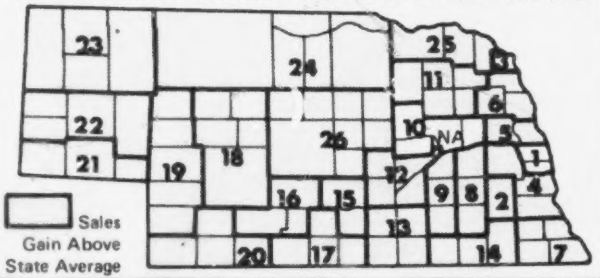
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	May, 1979 as percent of May, 1978	May, 1979 as percent of May, 1978	Year to date'79 as percent of Year to date'78
The State	93.4	92.6	101.1
1 Omaha	86.7	85.8	95.6
Bellevue	83.3		
2 Lincoln	94.5	93.3	101.2
3 So. Sioux City	94.7	88.7	95.4
4 Nebraska City	102.2	94.5	104.9
5 Fremont	100.0	96.8	103.8
Blair	94.2		
6 West Point	87.3	101.4	108.8
7 Falls City	94.0	98.5	101.7
8 Seward	104.0	99.8	103.0
9 York	103.4	101.9	110.7
10 Columbus	NA	NA	NA
11 Norfolk	97.0	96.3	105.4
12 Grand Island	94.0	93.8	106.5
13 Hastings	94.7	96.5	102.0
14 Beatrice	94.1	96.6	105.6
Fairbury	101.6		
15 Kearney	104.8	100.4	106.8
16 Lexington	98.7	95.0	108.0
17 Holdrege	80.0	88.9	106.4
18 North Platte	102.4	102.5	108.1
19 Ogallala	105.5	102.8	107.4
20 McCook	108.7	101.6	106.0
21 Sidney	100.2	94.4	103.1
Kimball	87.8		
22 Scottsbluff/Gering	91.6	90.5	104.5
23 Alliance	94.3	97.3	104.7
Chadron	95.4		
24 O'Neill	109.0	108.9	115.2
25 Hartington	91.1	91.6	104.1
26 Broken Bow	114.4	108.5	111.8

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

for the United States fell 0.4 percent during the second quarter when compared to the first quarter, and was only 1.6 percent above the second quarter of last year. The primary reason for this slump was the softness in the distributive sector, where second-quarter output was down 1.5 percent. It appears that consumer expenditures and confidence are worsening at the national level, with little if any improvement expected in the near future.

In sharp contrast to the national picture, the physical volume index for Nebraska showed considerable strength during the second quarter, 1979. The index rose 2.2 percent during this quarter when compared to the first quarter, and was 3.0 percent above the second quarter of last year. Although all sectors reported increases, the second-quarter growth was due primarily to a 10.0 percent increase in agricultural activity. Given the prospect of an excellent harvest, the outlook for the Nebraska economy is considerably more favorable than for the nation as a whole.

The construction sector reversed the trend of earlier quarters, as seasonally adjusted second-quarter activity was up 2.8 percent over the previous quarter. However, this increase was too little to compensate for previous losses. The index for March was 12.4 percent below the level of last June, with only twelve of the state's principal cities reporting increases over last year.

Growth in the manufacturing sector continued in the second quarter, as output was 0.8 percent higher than the first quarter and was accompanied by a 1.1 percent increase in employment. Compared to last June, this month's index showed a 5.1 percent increase. Based upon employment growth, durable goods manufacturing improved the most over last year.

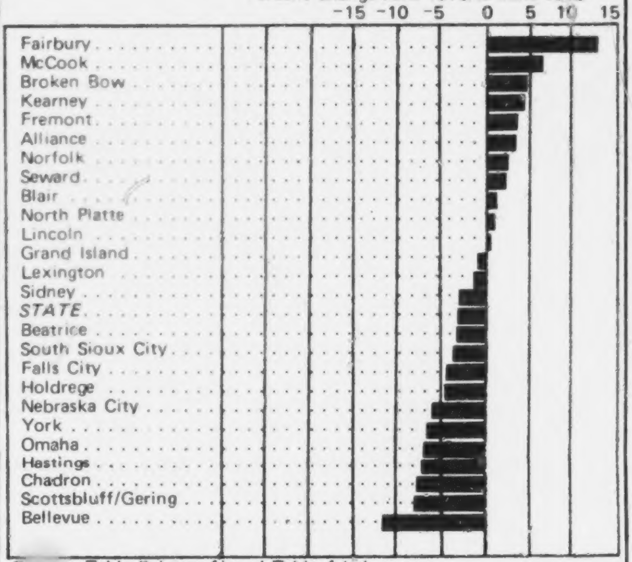
The physical volume index for the distributive sector rose 1.2 percent this quarter, with a slightly higher percent growth in employment. Compared to June, 1978, real output was down 0.6 percent, marking the first year-to-year drop in this sector since December, 1978. After adjustment for price changes, only eight of the twenty-five available planning regions reported retail sales above those of last June.

The index for the government sector rose 0.3 percent during the second quarter, with most of the growth occurring in May. Additionally, government activity was up 0.8 percent compared to June, 1978.

In June, eleven of the twenty-five reporting cities experienced increases in business activity relative to June, 1978. Fairbury recorded the largest gain (+12.9 percent). Other cities with June-to-June increases of 3.0 percent or more were McCook, Broken Bow, Kearney, Fremont, and Alliance.

J. A. D.

CITY BUSINESS INDEXES
Percent Change June 1978 to June 1979



Source: Table 3 (page 4) and Table 4 below.

4. JUNE CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	99.5	93.3	100.7
Alliance	124.9	21.6	121.9
Beatrice	99.9	78.8	101.1
Bellevue	96.2	43.3	101.1
Blair	97.4	105.3	143.4
Broken Bow	99.4	113.2	88.2
Chadron	94.2	87.4	70.1
Columbus	99.5	165.0	102.3
Fairbury	101.1	1144.4	112.8
Falls City	95.4	88.9	102.7
Fremont	103.6	102.1	117.8*
Grand Island	103.4	86.3	106.1
Hastings	100.8	45.1	83.7
Holdrege	100.1	301.9	85.5
Kearney	106.5	95.8	101.9
Lexington	97.0	104.6	99.9
Lincoln	102.4	133.3	102.0
McCook	96.2	176.9	122.8
Nebraska City	95.8	34.8	94.9
Norfolk	96.3	245.4	111.6
North Platte	96.8	113.2	108.3
Omaha	96.2	99.9	100.0
Scottsbluff/Gering	96.2	84.5	77.8
Seward	98.6	100.1	112.2
Sidney	94.8	65.7	108.7
So. Sioux City	93.3	97.9	110.5
York	95.2	24.3	101.8

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

June, 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	216.6	110.9	110.3
Commodity component	208.4	111.1	110.4
Wholesale Prices	233.1	111.2	111.0
Agricultural Prices			
United States	238.0	112.3	119.3
Nebraska	244.0	120.2	124.7

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(Continued from page 3)

economic activity. Investors in their individual decisions are alleged to move stock prices downward in advance of peaks in the economy and upward in advance of bottoms in the level of economic activity.

The most common measures of economic activity at the state level include the dollar volume Nebraska output, gross state product, Nebraska personal income, the physical volume of output, an index maintained by the Bureau of Business Research, and net taxable retail sales. These indicators provide an approximation of the level of economic activity. The indicators were available through 1978 and are plotted in Figure 2 (page 3). There is a sufficient number of observations to determine if trends exist. The indicators were converted into an index number for facilitating comparisons.

The trend of all the economic indicators in Figure 2 is up. The Nebraska Stock Price Index more or less goes along with this upward trend. The index peaked in the third quarter of 1977 prior to a peak in the state's physical volume output index, but other than that relationship, there would appear to be little pattern between the NSPI and other economic variables. The NSPI has leveled off in 1979, which may indicate a plateau in the Nebraska economy in the latter half of 1979 and 1980. A recession is under way nationally, and the leveling off in the NSPI may signal a leveling in the Nebraska economy. Considering the observations available through 1978, it would appear that the Nebraska Stock Price Index is not a reliable or accurate measure of changes in the level of economic activity. The measures move more or less simultaneously.

While stock price changes usually develop prior to major moves in the national level of economic activity, not all swings in stock prices are followed by a similar movement in the level of economic activity. For instance, the Dow Jones Industrial average declined from a September, 1976, high of 1014 to a February, 1978, low of 742 while the economy was generally expanding. It could be held that this decline was in anticipation of the 1979 recession, although it seems that such an interpretation would be stretching the credibility of the efficient market information theory. (For information on the Dow Jones average over an extended period of time, see Media General, *The Financial Weekly Market Digest,* September 10, 1979.) State stock price indexes may produce similar misleading signals.

CONCLUSIONS

The purpose in constructing a Nebraska stock price index was to ascertain whether it would be useful in predicting economic activity at the state level. An increasing amount of resources has been devoted to forecasting economic activity at the state level, and since some investigators contend that there is a relationship between stock prices and the level of economic activity at the national level, a search was made for a similar relationship at the state level.

The results presented here indicate that a stock index consisting of Nebraska stocks is not an adequate predictor of economic activity in the state. Admittedly, the tests are weak and require more statistical vigor, which can only come with additional data observations. While the number of observations is extremely limited, economic activity and stock prices have gone up during the period under review. With few major swings in economic activity over the observation interval, the period hardly constitutes a sufficient test of the index's predictive ability.

There is some reason to suspect that while there may be a relationship between stock prices and the level of economic activity at the national level, such a relationship may not hold in a state such as Nebraska. The national economy is passing through a recession which Nebraska may avoid if the recession remains mild by historic standards. Some of the stocks in the Nebraska Stock Price Index are probably influenced as much by national variables as they are by factors in Nebraska, and consequently their price may reflect national conditions more than conditions in Nebraska. It should also be noted that the sample size of the NSPI is limited and may not be representative of the Nebraska economy.

Before the NSPI is declared to be a useful economic indicator or put on the shelf as unreliable and inaccurate, more observations will have to be made. Additional Nebraska firms should be added to broaden the base of the index. With these improvements, the Nebraska Stock Price Index may find a place among the state's economic indicator series.

JONI K. PIERCE[*]

---

[*] Assistant Securities Analyst for Bankers Life of Nebraska.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 421 October, 1979

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*

COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

CONGRESSIONAL INFO SERVIC270188
7101 WISCONSIN AVENUE BR
WASHINGTON, DC 20014

S 7860-1

UNL News

Vol. 59 No. 11 November, 1979 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

MANUFACTURING IN NEBRASKA, 1967-1977: A DECADE OF PROGRESS

Nebraska continues to make solid progress in terms of manufacturing jobs, industrial diversification, and geographic dispersion of jobs across the state. These preliminary conclusions are drawn from the recently released *1977 Census of Manufactures*. This is the thirtieth census of manufacturing establishments in the United States, the latest in a series published on a quinquennial basis in years ending in 2 and 7.

The Census of Manufactures is conducted on an establishment basis. A firm operating at multiple locations is required to file separate reports for each geographical area. All manufacturing establishments, even those with only one employee, are covered by this census.

Census results indicate that 90,000 persons were employed in Nebraska's manufacturing establishments in 1977. This represents a 6 percent increase from the 1972 figure of 84,900 employees and is up from 77,000 employees in 1967.

Nebraska's manufacturing is more diverse today than it was five years ago. The single most important industry in terms of employment remains Food and Kindred Products. It is followed, in order of employment importance in 1977, by Machinery, except Electrical; Electric and Electronic Equipment; and Fabricated Metal Products. These industries accounted for 56 percent of the state's manufacturing employment in 1977, down from 60 percent in 1972.

Information in Table 1 (page 2) summarizes employment and value added by two-digit SIC code for the census years 1967, 1972, and 1977. Food and Kindred Products, Nebraska's most important employer in terms of numbers, has shown a slow but constant decline over the ten-year period. Employment totaled 21,800 in 1977, down from 26,000 in 1967. Machinery manufacturing, excluding electrical machinery, showed steady growth over the ten-year period 1967-1977. The census reported 12,900 workers employed in 1977, compared with 5,900 in 1967. Electrical equipment had a similar gain, with 9,000 persons employed in 1977, compared with 7,200 in 1967. The information in Table 1, however, indicates that there were slightly fewer persons employed in the electrical equipment industry in 1977 than in 1972.

Fabricated Metal Products, another important employer among Nebraska manufacturers, showed an increase in employment of 1,600 over the decade 1967-1977. Like the electrical equipment industry, employment in fabricated metal is up over the decade but is less than reported in 1972.

Printing and Publishing is an important industry in Nebraska and employment totaled 6,300 in 1977. This represents a gain of 900 employees since 1967, with steady employment growth over the three quinquennial censuses reported in Table 1.

The only major industry in Nebraska indicating secular decline in employment is Food and Kindred Products. Part of the decline in employment in this industry is related to the transition occurring in food processing. Older, obsolete packing plants are being closed in favor of new plants with a different technology, located near large feedlots. The fact that Food and Kindred Products employment is more than twice as large as the second-ranking industry in terms of number of employees is an important reason for the stability in Nebraska's employment picture. Consumers have difficulty in postponing eating over any prolonged period, but during a period of economic distress they can postpone the purchase of major consumer durables, apparel, and other items.

While employment has become less concentrated in Nebraska's major industries over the decade 1967-1977, concentration by value added has increased somewhat. Value added is a measure of manufacturing activity derived by subtracting the cost of materials, supplies, fuel, containers, utilities, contracted work, or any other cost of production from the value of shipments. The concept of value added avoids duplication, since some manufacturing firms purchase output from other firms in the manufacturing process. Value added is the preferred measure of an industry's contribution.

The value added component of Table 1 indicates an increasing concentration among the top five Nebraska industries. In 1977, the top five industries in terms of value added—Food and Kindred Products; Chemicals and Allied Products; Fabricated Metal Products; Machinery, except Electrical; and Electric, Electronic Equipment—accounted for 69.3 percent of all value added in manufacturing in Nebraska. These five industries accounted for 67.1 percent of Nebraska's value added in 1967 (Table 1).

Nebraska's most important industry in terms of employment and value added, Food and Kindred Products, experienced a doubling in terms of value added between 1967 and 1977, from $429 million to $824 million in 1977. This increase was less than that recorded for all industries and consequently the proportion of total value added in the state declined from 37.3 percent in 1967 to 29.6 percent in 1977.

The reason for the increasing concentration as measured by value added is explained by what happened in the remaining industries of the top five. Machinery, except Electrical, experienced an increase in value added from $100 million to more than $430 million over the interval

(Continued on page 2)

(Continued from page 1) 1967-1977. Electric and Electronic Equipment value added increased from $81 million to $288 million over the decade. Fabricated Metal Products had an increase of well over 100 percent, while Chemical and Allied Products had a 100 percent increase as well. The increase in terms of value added among three industries—Fabricated Metal Products; Machinery, except Electrical; and Electric, Electronic Equipment—were among the most rapidly growing in the state in terms of value added. Substantial gains were also recorded by the Instruments and Related Products industry and the Lumber and Wood Products industry.

GEOGRAPHIC DISTRIBUTION OF MANUFACTURING EMPLOYEES

A notable shift in the geographic concentration of industry has developed over the ten years 1967-1977. Much of Nebraska's manufacturing employment was centered in the east, with particular concentration in Douglas and Lancaster counties. In 1967, for example, more than 56 percent of all manufacturing employment was in these two counties. The *1977 Census of Manufactures* indicates that approximately 50 percent of all manufacturing employment, or 6 percentage points less, was in Douglas and Lancaster counties.

The data refer to all employees and are the average number of production workers plus the number of other employees in mid-March, 1977. The number includes full-time and part-time employees on the payrolls of operating manufacturing establishments. Included are persons on paid sick leave, paid holidays, and paid vacations. Officers of corporations are included as employees but proprietors and partners of unincorporated firms are excluded, according to the census definitions.

Note that the top ten counties in 1977 accounted for 77 percent of all manufacturing employment (see Table 2). This represents a 5 percentage point decrease from the 1967 figure of 82 percent. The balance of the state, 83 counties, had 23 percent of all manufacturing employment in 1977, as compared with 18 percent in 1967. This tendency toward less geographic concentration is probably desirable for the state, although it may not be fortunate for the individual counties experiencing decreases in employment in manufacturing. Notable increases in employment over the decade were recorded in Platte County, where the proportion of manufacturing employees to the state total increased from 4.3 percent to 5.1 percent; Lancaster County, where the proportion increased to 15 percent from 12.3 percent in 1967; Dawson County, to 3.1 percent in 1977 from 1.9 percent in 1967; and Madison County, 3.0 percent from 1.8 percent.

Employment in manufacturing establishments in Douglas County decreased by slightly more than 2,000 employees over the interval 1967-1977. In percentage terms, Douglas County lost

Table 1
NUMBER OF EMPLOYEES AND VALUE ADDED, BY INDUSTRY, 1967, 1972, AND 1977

	Employees (in thousands and percent)						Value Added (in millions of dollars and percent)					
Industry	1977	% of Total	1972	% of Total	1967	% of Total	1977	% of Total	1972	% of Total	1967	% of Total
Food and Kindred Products	21.8	24.2	24.5	28.9	26.0	33.8	854.3	29.6	581.0	33.5	428.7	37.3
Apparel, Other Textile Products	2.0	2.2	1.6	1.9	1.7	2.2	29.8	1.0	18.1	1.0	15.6	1.4
Lumber and Wood Products	2.5	2.8	2.3	2.7	0.9	1.2	55.4	2.0	30.8	1.8	7.3	0.6
Furniture and Fixtures	1.8	2.0	1.9	2.2	1.5	1.9	40.3	1.4	31.2	1.8	19.5	1.7
Paper and Allied Products	1.1	1.2	1.1	1.3	--	--	27.0	1.0	18.2	1.0	(D)	--
Printing and Publishing	6.3	7.0	6.0	7.1	5.4	7.0	149.0	5.3	92.8	5.4	59.6	5.2
Chemicals and Allied Products	2.4	2.7	2.2	2.6	2.3	3.0	213.5	7.6	92.7	5.4	91.7	8.0
Stone, Clay, Glass Products	2.8	3.1	2.5	2.9	2.2	2.9	83.0	2.9	53.7	3.1	32.1	2.8
Primary Metal Industries	2.7	3.0	2.6	3.1	2.6	3.4	102.3	3.6	88.3	5.0	57.9	5.0
Fabricated Metal Products	6.7	7.4	7.2	8.5	5.1	6.6	189.7	6.7	115.1	6.6	67.8	5.9
Machinery, except Electrical	12.9	14.3	8.7	10.2	5.9	7.7	430.4	15.2	192.2	11.1	102.1	8.9
Electric, Electronic Equipment	9.0	10.0	9.6	11.3	7.2	9.4	288.0	10.2	171.6	9.9	80.7	7.0
Transportation Equipment	4.3	4.8	3.4	4.0	3.6	4.7	116.6	4.1	68.5	4.0	51.3	4.5
Instruments, Related Products	3.5	3.9	2.9	3.4	1.7	2.2	145.6	5.2	82.4	4.8	36.6	3.2
Misc. Manufacturing Industries	1.5	1.7	1.5	1.8	1.7	2.2	24.9	0.9	8.8	1.0	16.5	1.4
Other	8.7	9.7	6.9	8.1	9.2	11.9	(D)		(D)		(D)	
Totals*	90.0		84.9		77.0		2,822		1,733		1,150	

(D) - Withheld to avoid disclosing figures for individual companies.

*Totals may not add because of rounding and because some data withheld due to the small number of firms. Data withheld by industry included in state totals.

Source: U.S. Department of Commerce, Bureau of the Census, *1977, 1972,* and *1967 Census of Manufactures.*

about 9 percentage points—the decline being from 44.1 percent of all manufacturing employment in Nebraska in 1967 to 35.3 percent in 1977. Hall County also experienced an absolute and relative decrease in manufacturing employment. Hall County lost more than 2,000 employees, or about one-third of the manufacturing labor force in 1967, and its share of the state total slipped from 7.8 percent in 1967 to 4.2 percent. Adams County slipped from sixth place in the top ten ranking to tenth in 1977. Platte and Hall counties shifted relative ranks over the decade 1967-1977, and Scotts Bluff County, Dawson County, and Madison County all moved up at least one position in terms of employment in manufacturing in the top ten Nebraska counties.

GEOGRAPHIC DISTRIBUTION BY VALUE ADDED

While employment, of course, is a significant measure of an industry's prominence and geographic concentration, value added is also an important measure.

Value added data for 1967 and 1977 for selected counties are summarized in Table 3. While there are many similarities between the rankings in Tables 2 and 3, there are some important exceptions. Douglas and Lancaster counties continued to rank first and second and Hall County ranked third in both periods. Value added in Douglas County totaled $1,101 million, $354 million in Lancaster County, and $148 million in Hall County. Rounding out the top five counties, Platte County recorded $113 million in value added and Madison County $103 million. Madison County ranked eighth in terms of employment in 1977, but note that it moved up to fifth position in terms of value added. Completing the top ten counties in terms of value added, the data in Table 3 place Scotts Bluff County in sixth position, Dodge County in seventh, Dawson County eighth, Buffalo County ninth, and Adams County in tenth.

Geographic concentration as measured by value added has lessened in Nebraska over the decade 1967-1977. The top ten counties accounted for 79 percent of all value added in 1977, as compared with 83 percent in 1967. It should be noted that two counties, Buffalo and Madison, were not in the top ten in terms of value added in 1967. Gage and Saline counties completed the top ten counties in 1967, but these two dropped out of the top ten in 1977 and were replaced by Buffalo and Madison counties. Buffalo ranked ninth in terms of value added (Table 3), while Madison ranked fifth. The increase in terms of value added and employment has been quite remarkable in Madison County. Value added increased nearly fivefold over the ten-year interval and the county had a higher rate of growth than any other Nebraska county.

The rate of increase in value added for selected Nebraska counties is summarized in Table 3. The implicit Gross National Product deflator increased 79 percent over this interval, so any increase in value added less than 79 percent means that the county in question failed to keep pace with inflation. In some cases, gains in value added were more likely inflationary than real.

Value added per employee is an interesting measure, for it's a rough approximation of the productivity of employees and in many cases reflects the capital labor ratios with which firms are operating. Value added per employee for 1977 in selected counties is summarized in Table 4 (page 6).

Gage County led all Nebraska counties with $42,200 per employee in value added. Platte and Saline counties recorded figures in excess of $40,000 per employee in value added in 1977. These results may be misleading, however, because of the small number of manufacturing jobs in these counties.

Douglas County, the largest county in the state in terms of numbers of employees, recorded value added figures of $34,600 per employee. Lancaster, a major manufacturing employment county in the state, had one of the lowest value added per employee of any Nebraska county. Lancaster's 1977 total was $26,200.

Directly related to value added per employee is payroll per employee. Payroll per employee in 1977 for all employees is summarized in Table 4. Douglas and Dodge counties led the state with an average of $13,700 per employee in payroll. Payroll items include all forms of compensation

(Continued on page 6)

Table 2
MANUFACTURING EMPLOYEES
TOP TEN NEBRASKA COUNTIES
1967 AND 1977
(in thousands)

	1967		1977		
County	Number of Employees	% of State Total	Number of Employees	% of State Total	Rank in 1967
Douglas	34.0	44.1	31.8	35.3	(1)
Lancaster	9.5	12.3	13.5	15.0	(2)
Platte	3.3	4.3	4.6	5.1	(4)
Hall	6.0	7.8	3.8	4.2	(3)
Dodge	2.7	3.5	3.1	3.4	(5)
Scotts Bluff	1.7	2.2	2.8	3.1	(7)
Dawson	1.5	1.9	2.8	3.1	(8)
Madison	1.4	1.8	2.7	3.0	(9)
Buffalo	1.4	1.8	2.5	2.7	(9)
Adams	1.8	2.3	2.1	2.3	(6)
Balance of State		18%		23%	
Top Ten Counties		82%		77%	

Table 3
VALUE ADDED, 1967-1977, SELECTED COUNTIES

	Value Added (in thousands of dollars)			
County	1967	1977	Percentage Increase	Constant Dollar Percentage Increase
Douglas	565	1,101	95	9
Lancaster	120	354	195	65
Hall	53	148	179	57
Platte	40	113	182	58
Dodge	43	86	100	11
Adams	28	71	154	43
Scotts Bluff	29	91	214	78
Dawson	36	83	130	27
Buffalo	17	78	359	159
Madison	19	103	442	205
Gage	27	51	89	4
Saline	21	69	228	80

Review and Outlook

Real output in Nebraska recorded its second consecutive monthly decrease in July, with the physical volume index for the state recording a decline of 3.6 percent. The June-to-July decrease resulted in an index value which was 40.9 percent above its 1967 base-period level. Compared to its level of July, 1978, the index reported a 0.4 percent increase.

This month's decline in economic activity was felt throughout the Nebraska economy, with both agricultural and nonagricultural indexes falling during the month. Manufacturing was the only sector reporting an increase, as preliminary data indicate that output was up 0.6 percent.

The four other sectors and their June-to-July declines were: agriculture, -18.9 percent; construction, -3.3 percent; distributive, -1.5 percent; and government, -0.8 percent. The composite index of the four nonagricultural sectors was down 1.0 percent.

Although Nebraska still faces the prospects of a mild recession, the current economic outlook is volatile, especially in view of increasing interest rates and uncertainties about the availability and prices of energy. If grain and livestock prices hold, however, the outlook for Nebraska will be more favorable than that of the national economy.

The agricultural sector, with dramatic month-to-month changes, has been the most volatile sector so far during 1979. Although the July decrease in the index for this sector was sizable, the index was still 6.9 percent higher

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

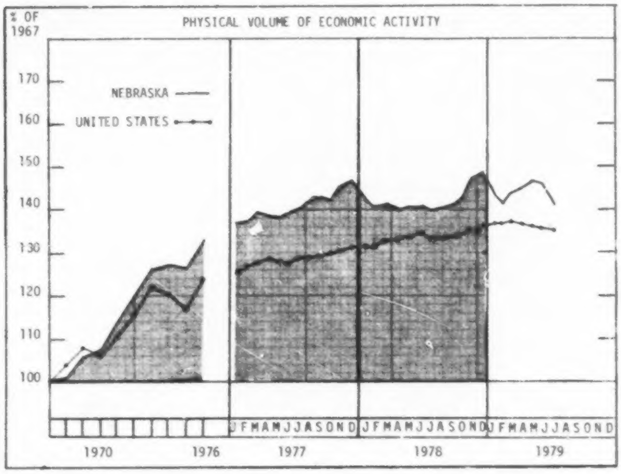
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

July, 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	113.3	112.3	114.4	113.2
Agricultural	129.8	129.8	128.0	126.3
Nonagricultural	111.2	111.8	112.4	112.8
Construction	97.0	108.1	101.6	113.1
Manufacturing	116.8	116.5	118.0	116.9
Distributive	110.1	110.6	111.8	111.8
Government	113.4	107.3	110.9	107.5
Physical Volume	100.4	101.2	101.7	102.5
Agricultural	106.9	114.7	102.7	106.5
Nonagricultural	99.6	100.8	101.5	102.3
Construction	86.8	96.7	89.2	99.4
Manufacturing	104.7	104.1	106.5	105.6
Distributive	98.9	99.4	101.3	101.3
Government	99.5	100.9	99.6	100.6

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	318.0	299.3
Agricultural	277.8	282.6
Nonagricultural	324.9	299.9
Construction	321.5	286.7
Manufacturing	374.4	297.0
Distributive	315.4	307.5
Government	296.7	280.3
Physical Volume	140.9	135.2
Agricultural	113.8	117.7
Nonagricultural	145.5	135.8
Construction	120.9	107.8
Manufacturing	162.0	129.5
Distributive	144.1	140.5
Government	137.8	142.1



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

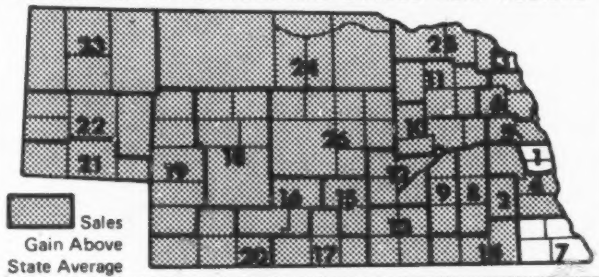
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	July, 1979 as percent of July, 1978	July, 1979 as percent of July, 1978	Year to date '79 as percent of Year to date '78
The State	102.5	101.3	101.1
1 Omaha	100.5	98.6	96.1
Bellevue	101.6		
2 Lincoln	104.7	102.1	101.4
3 So. Sioux City	89.1	89.5	94.5
4 Nebraska City	86.9	95.2	103.4
5 Fremont	101.7	100.9	103.4
Blair	102.8		
6 West Point	100.6	105.7	108.3
7 Falls City	92.2	94.5	100.6
8 Seward	115.9	105.8	103.4
9 York	96.9	101.3	109.2
10 Columbus	98.6	103.2	107.4
11 Norfolk	107.6	105.8	105.4
Wayne	106.1		
12 Grand Island	99.8	98.7	105.2
13 Hastings	102.7	98.8	101.5
14 Beatrice	97.1	98.8	104.6
Fairbury	92.2		
15 Kearney	99.4	98.3	105.4
16 Lexington	103.8	105.9	107.7
17 Holdrege	91.5	94.4	104.3
18 North Platte	99.7	99.8	106.7
19 Ogallala	108.7	110.5	107.9
20 McCook	98.9	98.0	104.7
21 Sidney	114.7	104.9	103.5
Kimball	93.1		
22 Scottsbluff/Gering	108.5	106.5	104.9
23 Alliance	110.3	105.4	104.9
Chadron	105.6		
24 O'Neill	104.8	102.8	113.2
25 Hartington	104.8	106.0	104.4
26 Broken Bow	123.7	104.3	110.7

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

than last July. Prices received by Nebraska farmers were unchanged during July, but were 21.4 percent above their level of July, 1978.

Manufacturing continued its trend of steady growth which began in December, 1977. During this twenty-month interval, output in this sector has fallen only three times. July's index for manufacturing was 4.7 percent above its level of July, 1978, making it the only nonagricultural sector with a year-to-year increase. Preliminary employment data also point to the strength of this sector as they indicate a gain of nearly 4,000 workers over last year. Durable goods industries accounted for most of the increase.

In July, the index of activity for the government sector dropped to its lowest level since January and was 0.5 percent below the level of July 1978. Government employment in Nebraska was down 750 workers from last February, with most of the reduction occurring at the local level.

The index of construction activity fell to its lowest level of 1979, 13.2 percent below the level of last July. All segments of the construction industry—residential, non-residential, and nonbuilding—experienced year-to-year losses. With increasing interest rates and fewer funds available for loans, it is unlikely that this sector will rebound in the near future. The softness of this sector has been felt by the state's principal cities, where only eleven cities recorded increases over last year. The cities with the largest increases were: Fairbury, Holdrege, Norfolk, McCook, Broken Bow, and Columbus.

Real output in Nebraska's distributive sector was down 1.1 percent from its year-earlier level, giving it the second largest year-to-year drop for the five sectors. Despite this decline, employment was 10,500 persons above last July's figures. Based upon employment growth, the most rapidly expanding areas were transportation, communications, and utilities.

After adjustments for price changes, fifteen of the state's twenty-six planning regions had total retail sales above the sales of July, 1978. Additionally, non-motor vehicle sales in nineteen of thirty-two cities were higher than last year. Seward, Sidney, and Alliance had increases of more than 10 percent, while Ogallala, Scottsbluff/Gering, Norfolk, Wayne, and Chadron all posted increases exceeding 5 percent.

The July loss in the state's economy was not reflected in the city business indexes, as sixteen of the twenty-six reporting cities registered gains relative to July, 1978. Most of the cities achieved their growth through increases in retail sales and employment. Alliance posted the largest gain in activity, with an increase of 11.6 percent. Other cities with July-to-July increases exceeding 5 percent were Broken Bow, Seward, Norfolk, Sidney, and Fairbury.

J. A. D.

5. PRICE INDEXES

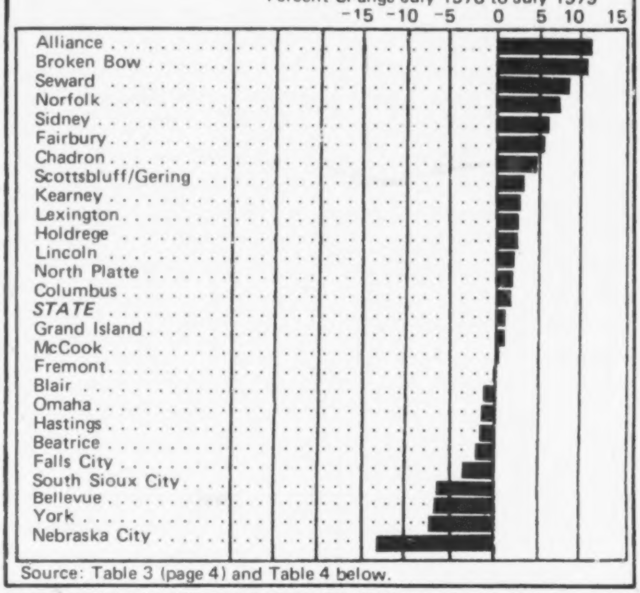
July, 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	218.9	111.3	110.4
Commodity component	210.5	111.6	110.6
Wholesale Prices	236.6	112.3	111.2
Agricultural Prices			
United States	240.0	113.2	118.4
Nebraska	244.0	121.4	124.2

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES

Percent Change July 1978 to July 1979



Source: Table 3 (page 4) and Table 4 below.

4. JULY CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	100.9	94.6	94.7
Alliance	126.5	35.6	113.3
Beatrice	100.8	90.8	91.3
Bellevue	97.2	43.8	79.0
Blair	98.0	93.6	87.9
Broken Bow	99.7	187.2	86.5
Chadron	99.6	57.9	148.2
Columbus	99.7	180.7	93.9
Fairbury	101.4	739.2	92.0
Falls City	95.8	99.8	108.0
Fremont	103.9	79.9	86.7*
Grand Island	104.5	83.3	96.2
Hastings	103.4	46.8	91.3
Holdrege	100.0	340.0	103.0
Kearney	107.7	104.2	96.3
Lexington	102.4	91.7	103.3
Lincoln	98.3	140.3	91.7
McCook	97.0	189.1	90.5
Nebraska City	96.7	32.5	79.9
Norfolk	101.0	191.7	113.2
North Platte	107.2	82.1	98.1
Omaha	97.2	103.6	92.7
Scottsbluff/Gering	97.0	84.0	114.3
Seward	101.7	124.9	102.0
Sidney	95.5	133.3	105.6
So. Sioux City	94.9	91.7	107.7
York	102.0	24.8	98.8

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 3) such as wages, salaries, commission, redundancy pay, dismissal pay, bonuses, vacation and sick leave pay, and compensation-in-kind. Payroll measures were reported before any deductions for employees' social security contributions, withholding taxes, insurance, union dues, or other miscellaneous deductions such as savings bonds. Payroll includes salaries paid to officers of the firms, but excludes payments to proprietors or partners of unincorporated firms. Gage County, which had one of the highest value added per employee figures, ranked lower in terms of payroll per employee—$11,800. Hall County ranked third in terms of payroll per employee at $12,300, $400 behind Douglas and Dodge counties. Scotts Bluff, Adams, and Saline counties had payroll per employee of $12,000 or more.

D. E. P.

Table 4
VALUE ADDED PER EMPLOYEE
AND PAYROLL PER EMPLOYEE
FOR SELECTED NEBRASKA COUNTIES, 1977
(in thousands of dollars)

County	Value Added per Employee	Payroll per Employee
Adams	33.7	12.0
Buffalo	31.4	11.8
Dawson	29.5	11.9
Dodge	27.7	13.7
Douglas	34.6	13.7
Gage	42.2	11.8
Hall	39.0	12.3
Lancaster	26.2	11.8
Madison	38.1	11.6
Otoe	31.4	9.1
Platte	40.5	10.5
Saline	40.7	12.0
Scotts Bluff	32.5	12.5
All other counties	26.8	10.8

NEW PUBLICATION

The Bureau of Business Research is pleased to announce the publication of *Health Care Cost Containment: The Managerial Approach.* The publication is a summary of a conference at the University of Nebraska-Lincoln sponsored by the College of Business Administration, the Division of Continuing Studies, and the College of Business Administration's Insurance Advisory Committee. The conference was held in November, 1978.

Topics covered in the publication include "Why Your Health Care Costs Have Been Escalating," by Charles P. Hall; "The Voluntary Effort—What It Is and How It Is Progressing," by James D. Huoy; "The HMO Approach," by William J. Walsh; "What Is Being Done by Employers to Control Health Care Benefit Costs," by Edmund Russel; "What Your Organization Can Do to Control Your Health Care Benefit Costs, Now and in the Future," by Willis B. Goldbeck; "What You Should Expect from Your Insurer with Respect to Health Care Cost Containment," by Tim Eagan; and "What Your Insurer Should Expect from You with Respect to Health Care Cost Containment," by Sharon Eissler. These issues are further discussed by a panel.

The volume is available for $7.50 per copy from the Bureau of Business Research, 200 CBA, University of Nebraska-Lincoln, Lincoln, Nebraska.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska-Lincoln 68588. Material herein may be reproduced with proper credit.

No. 422 November, 1979

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

U7860-1 A

RECEI
Jan 4, 1980

UNL News
Vol. 59 No. 15 December, 1979 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska-Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

THE EFFECTS OF USURY CEILINGS

During the last fifteen years there have been recurrent conditions in financial markets that have caused state governments to review both the levels and effects of their usury laws. Since 1966 there have been four tight-credit periods during which interest rates have reached successively higher levels. During each of those periods, those states with effective usury ceilings which are lower than the general level of interest rates have experienced noticeable shortages of credit and the corresponding adverse impact on their economies. It is generally believed by economists that there is a close relationship between restrictive usury ceilings and the supply and allocation of credit within a state; available empirical evidence tends to support this belief. It is the purpose of this article to consider this issue and to discuss other salient issues concerning usury ceilings.

Usury ceilings are a form of price control, that is, an attempt by a governmental unit to impose the maximum price (interest rate) that may be charged for a commodity or service (credit). Legal ceilings usually are set at levels that are higher than the rate established by the market. As long as this condition prevails, the price of credit will be determined by the supply and demand for funds, and usury ceilings are not an effective force in the credit market. In most states this lack of effectiveness existed for several decades preceding the late 1960s, and usury laws were not generally regarded as a serious problem. Beginning with the tight credit conditions of 1966 and the significant upward movement in the price level, it was recognized that usury ceilings were adversely affecting both the volume of credit available within states and its allocation among the different sectors of the state's economy. Comparable events were repeated and intensified during the credit crunches of 1969-70 and 1974-75. In each instance, most states amended their usury statutes to permit higher legal rates of interest. In a few states such changes require lengthy constitutional amendments; where such constraints exist, there is little question that they have had adverse effects on the local economies. The result has been that usury ceilings have been repeatedly raised, or adjusted in some manner, during the past few years in most states. While each increase was established at a ceiling above the prevailing market rate to provide some degree of flexibility, the changes in many states have proven to be inadequate in the current economic environment, and they are once again under review.

In the United States there has been no national usury ceiling since the colonial period. With the establishment of the Republic, each state has had the prerogative of establishing its own usury laws. As a result, there are numerous differences in state statutes in terms of exemptions as to size and type of loan, covenants of the loan contract, penalties for violations, as well as the ceiling. Since each state's economy is a small segment of a larger national economy and since financial transactions may move freely across state boundaries, one state may make its own financial transactions more or less attractive than those of its neighbors. Credit is perhaps the most mobile of all commodities, and its movement responds very quickly to significant differences in the terms available. The inevitable consequence is a disruption in the normal financial transactions within the state with the restrictive ceiling.

In addition, no state can escape the effects of national economic policies, particularly monetary policy. During the periods of high rates of inflation, tight credit markets are inevitable, and markets are characterized by increasing interest rates as lenders add an inflation premium to protect their real rates of return. If tight credit markets are accompanied by a restrictive monetary policy, as is apparently true presently, interest rates will be pushed upward even further, at least for as long as the policy exists. For these reasons, the market rates of interest will periodically exceed the usury ceilings and limit the availability of credit within the state.

Religions and ethical arguments have historically been used to justify the existence of usury laws. More recent arguments have tended to be slightly less moralistic in tone and placed within the context of their economic significance. The most frequently cited arguments for usury ceilings are those discussed below.

1. They are necessary to protect the small, unsophisticated borrower who would otherwise be subjected to excessive rates by the lender. This argument has two aspects: First, the borrower is assumed to be uneducated and naive, and unaware of the most fundamental technical aspects of financial transactions. Therefore, he must be protected from his own foolish behavior. Second, the borrower will be systematically enticed by the lender into paying rates higher than he thinks he is paying, that is, unconscionable rates; in this instance he must be protected from the lender. If this type of argument ever had any validity, it is redundant in all states today because of the "small loan" statutes which exist.[1] It is clear that the borrowers to whom such arguments apply are those small borrowers who are seeking credit for consumption purposes.

2. It has been argued that usury laws are necessary to restrain the monopoly power of the lender. The lender is assumed to have disproportionate market power over the borrower. This assumes that since there are more borrowers than lenders, the latter's greater resources result in the charging of excessive rates of interest. Thus, some form of protection

(Continued on page 2)

(Continued from page 1)

for the borrower is essential to balance the bargaining position. This argument seems to be accorded the greatest degree of validity by the proponents of usury laws. Whatever its merit in the past, it appears to have very little applicability in complex economic and financial systems. The typical borrower has many alternative sources of credit from various types of financial institutions and from the money and capital markets. Consequently, the pervasiveness of monopoly power is questionable, and in those instances where it exists it is more likely to result in some form of credit rationing which is made necessary by an arbitrary price control.

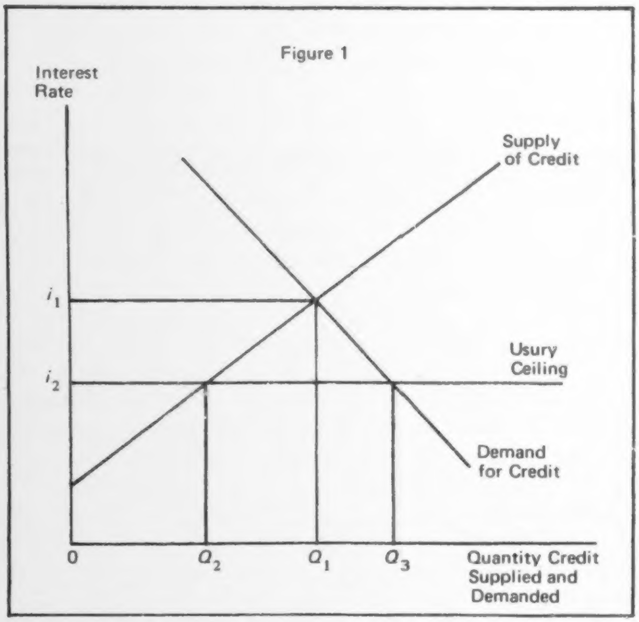
3. It is contended that low usury ceilings will promote higher levels of consumption and investment and thereby a higher level of economic growth and development. This proposition is unassailable if it leads to lower interest rates. However, it has little relevance if usury ceilings are below the market rates, because there will not be adequate credit to support the higher level of economic activity. It is the recognition of this relationship between the credit needed to support a higher level of economic activity that has caused states to consistently adjust their usury ceilings upward.

The remainder of this article attempts to evaluate the merits of these arguments.

The effects of interest rate ceilings depend primarily on two factors: (1) the level of the ceiling and (2) the types and sizes of loans exempted from the ceiling. These two factors determine the applicability of the ceiling. The closer the ceiling is to the market rate, the smaller its impact on credit flows, and the larger and more varied the exemption, the less its effect. However, to the degree that it is effective, there tends to be a shortage and misallocation of credit. The following simplified graph may be used to demonstrate these effects of ceilings (Figure 1).

In this graph the usury ceiling is below the market rate of interest, i_1. If the market rate had been permitted, the quantity of credit supplied at i_1 would have been the amount $0Q_1$. However, since the lender must abide by the ceiling rate, i_2, the volume of credit that is withdrawn from the market is the difference between $0Q_1$ and $0Q_2$, or Q_2Q_1. There are borrowers who are willing to accept funds at the existing market rate but who are prohibited from doing so by the legal ceiling. At this artificially low rate, there are an excessive number of demanders of credit who are not effective in the market because the quantity Q_1Q_3 will not be available in any case. This group could have their demand accommodated only if the supply of credit were increased, which is the opposite of what is likely to occur.

Figure 1



The graph demonstrates two clear immediate results when the usury ceiling is below the market rate of interest. The volume of credit supplied to borrowers is reduced and whatever volume is supplied will be rationed among the available borrowers. Why will the volume of available credit decline? Mainly because the lenders will have numerous uses for their funds in areas and instruments that are not subject to the ceilings. Another reason is the high cost of funds for the lenders. Financial institutions purchase the bulk of their lendable funds and the rates charged on their loans must reflect these costs. For example, most of the funds purchased by banks, savings and loan associations, credit unions, PCAs, etc., are short term and will reflect money market rates. During periods of restrictive credit policies by the Federal Reserve these rates will be very high; recently the cost of these funds has exceeded the usury ceiling in Nebraska. Obviously, financial institutions have neither the ability nor will to continue to lend under such circumstances. If this is true, one might ask why lenders would supply any volume of funds at the restrictive usury ceiling rates? There are two main reasons: First, lenders have loan commitments that may have been made some time ago and which are legally binding. These commitments and lines of credit will be honored. Second, all lenders have customers with whom they have had long-standing and mutually desirable relationships. These relationships are not tenuous and the lender is likely to consider the long-run profitability of the association. Financial institutions are usually willing to serve these customers for a time, but not indefinitely, and probably at loan limits smaller than the borrower needs, desires, or to which he has become accustomed.

There is another effect of usury ceilings that is important. The lender will engage in various kinds of nonprice credit rationing; this will occur even among the borrowers that it wishes to accommodate. This involves making the terms of the loan contract more restrictive. For example, the lender will demand greater collateral, larger compensating balances, service charges, reducing the maturity of the loan, and the like. All of these restrictive clauses of the loan contract have the effect of reducing the risk factor associated with the loan which permits a lower than normal rate. It also has the effect of eliminating from the market those borrowers that are unable to make the contract adjustments; these are apt to be those borrowers for whom usury ceilings are designed to protect and who have fewer alternative sources of credit.

Ceilings that are set at levels below the market rate have an impact on all types of lending, but because of exemptions to their applicability they are most visible for real estate loans to which they apply. There have been several studies conducted dealing with the effects of ceilings on this market and there seem to be two clear results. First, marginal borrowers are quickly rationed out of the market. This is true because the lenders are not permitted to charge above average rates that are required to compensate for the additional risks inherent in the loans. These borrowers will typically be younger people who have fewer funds for higher down payments, less affluent borrowers that have fewer financial assets, and purchasers of homes in neighborhoods where there is an expectation of greater than normal depreciation. In general, these are the types of borrowers usury laws are designed to protect; however, the type of protection afforded is questionable, because it normally results in their receiving no credit rather than less expensive credit.

The second effect is that residential mortgage lending in the state with the low usury ceiling will decline relative to a state where the ceiling is not a barrier. A corresponding effect is also a reduction in activity in the construction industry because abundant credit is essential to sustain an expanding building industry. It seems clear that all aspects of the residential building and mortgage markets are affected in an adverse manner when restrictive usury ceilings are present.

There are several alternatives available to a state as to the type of action it may take regarding its usury statutes. Some of these alternatives are discussed below.

1. The state may simply abolish its general usury statutes. At least two states have taken this action and it is being discussed in several others. The central question resulting from this action is whether lenders are able to take undue advantage of borrowers without some type of usury ceiling. The evidence seems to indicate that there is adequate competition in the financial markets to protect the borrower from abuse. One study conducted in five metropolitan areas where the ceiling was above the national average does not suggest that local lenders immediately raise the rates to the ceiling but are restrained by the national average. These results appear to be consistent with a competitive and mobile financial market. There are numerous other studies which indicate that interregional interest rate differentials are the result of demographic factors, transaction costs, degrees of risk, and the like, rather than excessive market power of the lenders.

If lenders were free to arbitrarily impose rates on borrowers without regard to market forces, it seems odd that they did not do so during the years prior to the late 1960s. For decades prior to this period, usury laws were consistently above the rates actually charged and mortgage lenders charged rates substantially below the usury ceilings. This suggests that lenders are not immune from the normal market forces, and that the predominant factors determining interest rates are the supply and demand for loanable funds. Nevertheless, most states have chosen not to eliminate their usury statutes but to adjust them in some manner to reduce their effects.

2. Since 1974 several states have adopted a floating usury ceiling. That is, they have tied their usury ceilings to some other interest rate. It was believed that this type of change would be a permanent solution to the problem of recurrent changes in the ceilings. However, despite setting the floating ceiling at a level above the chosen rate, the unusually high interest rates of 1979 have forced many states to consider further changes. This condition is always a threat unless the ceiling is permitted to float at such a high level that it is ineffective, that is, well above the market-determined rate.

There are three problems associated with a floating rate that may cause it to be disruptive. First, to what interest rate should the usury ceiling be tied? Several states have chosen the Federal Reserve discount rate. One reason for using this rate is the ability of nationally chartered banks to tie the maximum rates they may charge to the discount rate. National banks may charge 100 basis points (that is, one percentage point) above the discount rate or charge the state usury ceiling, whichever is greater. During tight money periods this creates a competitive advantage for national banks over state-chartered banks and savings and loan associations, which is a situation that many states have tried to alleviate. Despite its widespread adoption, the discount rate is perhaps the most undesirable rate to use. It is not a market-determined rate; it is administratively set by the Federal Reserve and has historically lagged well behind the market-determined rates. For example, until the last few months it had never exceeded 8 percent and during 1974 there was a difference between the discount rate and the federal funds rate of more than 500 basis points. The Federal Reserve has been more willing to increase the discount rate during the current tight money period (it is currently 12 percent), but it is still an administrated rate which lags the market. In addition, if state usury laws were tied to the discount rate at any reasonable differential, it would encourage the Federal Reserve to consider the impact of its actions on state economies.

Other states have used long-term bond rates as the base for their floating ceilings. Logic would seem to suggest that this might be a more desirable alternative. However, during periods of tight credit policies the yield curve will be sloping downward, that is, short-term rates are higher than long-term rates. It will be the short-term rates that are most closely related to the cost of funds for lenders and will be a more important factor in their willingness to extend loans to their customers. Consequently, during periods of inflation and tight credit conditions when usury ceilings are most apt to be a barrier to lending, a floating ceiling tied to longer-term instruments is unlikely to provide much relief; this is certainly true at the present time.

Tying a floating ceiling to short-term rates provides no better alternative as a permanent solution. While it would be a more desirable choice under the present economic conditions, one cannot assume that a downward-sloping yield curve will exist indefinitely. It is expected that eventually credit markets will weaken and inflation will be reduced, at least to more reasonable levels. Under such conditions, short-term rates will be far lower than long-term rates and lenders might find the difference plus the amount of the float inadequate to compensate for locking in their funds for longer maturity loans, such as residential mortgages and term loans to noncorporate borrowers. The only real way of assuring an effective formula tied to the short-term rate would involve a floor as well as a ceiling on the magnitude of the float in order to permit lenders an opportunity to earn the necessary liquidity premium.

If a floating rate tied to some market rate were desired, the simplest and most desirable alternative would appear to be some intermediate rate, for example, the 3-5 government security, accompanied by a float of several hundred basis point variation.

A second problem associated with the floating ceiling is the size of the differential required before adjustments in the ceiling are permitted. That is, how close to the ceiling must the chosen rate be before it is permitted to be

(Continued on page 5)

Review and Outlook

The level of economic activity in Nebraska rose slightly in August, with two of the five sectors showing gains when compared to July. The state's index of real output, which had declined in the two previous months, increased 0.2 percent from its July level and was 0.4 percent above its value of last year. The value of the index was 41.3 percent above its 1967 base-period level.

The August increase was due primarily to an increase in the agricultural sector, where activity rose 7.0 percent, after declining sharply last month. Moreover, prices received by Nebraska farmers in August were 17.1 percent higher than prices in August, 1978. With higher prices and excellent harvests, it seems likely that increasing agricultural cash receipts can be expected to provide some stimulus for the Nebraska economy during the remainder of 1979.

In contrast to the strength of the agricultural sector, the nonagricultural sectors have exhibited considerable weakness during the last few months. The composite index of the four nonagricultural sectors was down 0.7 percent during August, the third consecutive monthly decrease and the fourth decrease in 1979. The July-to-August changes in the nonagricultural sectors were: government, +0.3 percent; distributive, -0.4 percent; manufacturing, -1.6 percent; and construction, -3.7 percent.

Nineteen of the twenty-six reporting cities registered gains relative to August, 1978. This growth was achieved through increases in retail sales, employment, and power consumption. (See tables on page 5 for additional data.)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

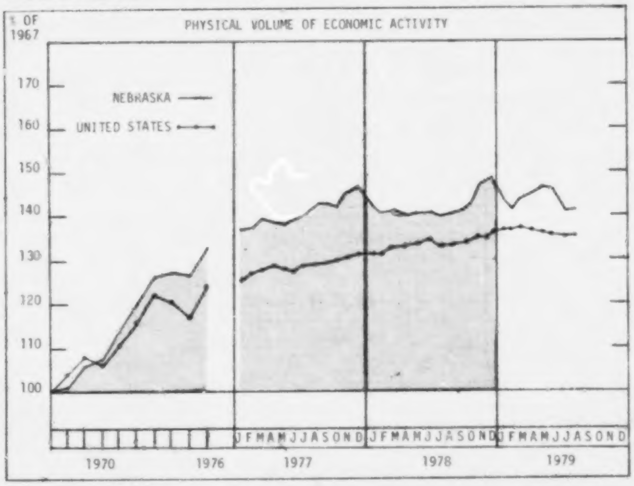
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

August 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	113.3	112.4	114.3	113.1
Agricultural	128.3	120.6	128.0	125.5
Nonagricultural	111.3	112.1	112.3	112.7
Construction	96.0	107.3	100.9	112.5
Manufacturing	117.1	115.8	118.1	116.7
Distributive	110.4	111.7	111.6	111.9
Government	112.6	107.4	110.9	107.5
Physical Volume	100.4	100.9	101.5	102.3
Agricultural	109.6	107.4	103.5	106.6
Nonagricultural	99.2	100.7	101.2	102.1
Construction	85.1	95.0	88.5	98.7
Manufacturing	104.5	102.9	106.5	105.2
Distributive	98.8	99.9	100.9	101.2
Government	97.8	101.2	99.2	100.7

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	321.2	302.9
Agricultural	292.2	299.6
Nonagricultural	326.2	303.0
Construction	314.2	285.7
Manufacturing	378.8	296.5
Distributive	317.0	313.5
Government	294.7	282.0
Physical Volume	141.3	135.7
Agricultural	121.8	125.9
Nonagricultural	144.7	136.0
Construction	115.5	105.0
Manufacturing	162.5	128.2
Distributive	143.4	141.8
Government	136.3	142.3



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

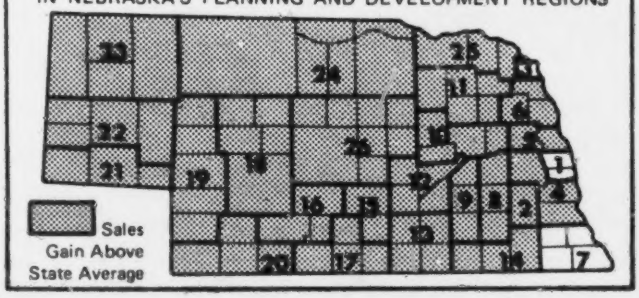
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	August 1979 as percent of August, 1978	August 1979 as percent of August 1978	Year to date '79 as percent of Year to date '78
The State	104.5	103.2	101.4
1 Omaha	110.2	106.1	97.3
Bellevue	95.6		
2 Lincoln	104.4	102.3	101.5
3 So. Sioux City	85.0	90.5	93.9
4 Nebraska City	87.3	99.6	102.8
5 Fremont	104.8	101.4	103.1
Blair	90.4		
6 West Point	114.1	101.1	107.3
7 Falls City	99.3	102.9	100.9
8 Seward	94.3	100.6	103.1
9 York	108.0	103.0	108.3
10 Columbus	104.6	100.7	106.5
11 Norfolk	109.3	105.9	105.5
Wayne	102.8		
12 Grand Island	103.9	104.4	105.1
13 Hastings	108.8	106.1	102.2
14 Beatrice	105.7	105.9	104.8
Fairbury	116.6		
15 Kearney	113.0	110.6	106.1
16 Lexington	92.6	102.0	106.9
17 Holdrege	100.0	101.3	103.9
18 North Platte	103.2	100.4	105.8
19 Ogallala	88.4	91.1	105.4
20 McCook	107.8	104.3	104.7
21 Sidney	98.3	95.1	102.2
Kimball	92.2		
22 Scottsbluff/Gering	110.1	105.5	105.0
23 Alliance	92.8	96.0	103.6
Chadron	91.9		
24 O'Neill	106.7	107.6	112.4
25 Hartington	117.9	106.5	104.7
26 Broken Bow	118.3	109.9	110.6

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 3)

increased. In addition, are the increments in the float to be broad or narrow, say, 50 or 100 basis points at a time? Also, the speed must be determined with which the adjustments will be made; for example, if the key rate increases this week, how much time must elapse before the ceiling floats upward or downward? None of these questions is easily answered, and the concept of a floating usury ceiling is not a simple solution to the problem.

3. A third alternative is to retain a fixed usury ceiling, but broaden the types of loans that are declared exempt. Most states that have a fixed ceiling have declared loans to corporations exempt, while others have also established loans beyond a certain size not subject to the legal ceiling. This makes the ceiling less effective and thereby less disruptive to the state's economy. But here again, it may reduce the availability of credit for those individuals that usury ceilings are designed to protect. It is the small, personal borrower that will see his sources of credit eliminated, or he will be forced to a higher priced form of credit, that is, he will be compelled to seek a lender with the authority to charge a rate higher than that charged by more traditional lenders.

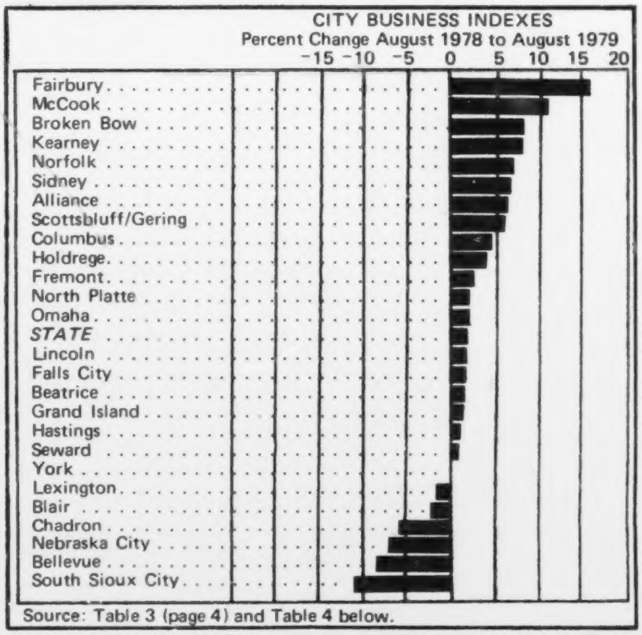
In summary, it is my judgment that general usury ceilings should be abolished, or if retained, they should be set or permitted to vary at a high enough level to avoid encumbering the availability of credit. This judgment is not made on the assumption or contention that higher interest rates are socially or economically more desirable than lower rates. The empirical evidence leads one to conclude that ceilings simply do not accomplish the objectives for which they are designed, and when they are below the market rate of interest they have their worst impact on both potential borrowers and the state's economy. If these observations were not fairly obvious, state legislatures would not subject themselves to debating such a sensitive topic each time the usury ceiling becomes effective.

L. WAYNE DOBSON*

---

*Abbott Professor of Banking and Professor of Economics, University of Nebraska-Lincoln.

[1] As the desire for consumer goods became commonplace after the turn of the century, state usury laws were a cumbersome obstacle to obtaining consumer credit. These small loans were unprofitable at the permitted rates and an illegal market arose which was onerous and unconscionable. Most states by the 1920s had adopted some form of small loan law that permitted the lending of limited amounts for certain types of loans at rates that far exceeded the general usury statute. Since banks made few of these types of loans, various types of finance companies were chartered by the states to accommodate this need. Today they are most commonly referred to as personal loan or finance companies. In reality, most states have two usury ceilings: one that applies to small loans and another that is regarded as the general usury ceiling.


CITY BUSINESS INDEXES
Percent Change August 1978 to August 1979

Source: Table 3 (page 4) and Table 4 below.

4. AUGUST CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	100.6	95.4	100.9
Alliance	126.1	47.0	119.7
Beatrice	99.6	95.9	94.4
Bellevue	94.8	37.0	101.9
Blair	97.4	66.6	144.7
Broken Bow	99.1	136.3	94.9
Chadron	98.5	51.8	110.2
Columbus	98.8	199.2	100.9
Fairbury	100.7	323.0	140.1
Falls City	99.1	129.5	110.9
Fremont	102.9	94.3	97.0*
Grand Island	103.7	77.8	92.5
Hastings	103.1	48.5	92.3
Holdrege	99.4	293.4	90.6
Kearney	106.5	111.9	94.5
Lexington	101.8	94.4	109.9
Lincoln	97.7	122.2	99.7
McCook	100.1	240.3	136.9
Nebraska City	101.2	58.1	105.9
Norfolk	100.5	154.7	110.4
North Platte	106.3	82.6	90.1
Omaha	94.8	97.5	100.8
Scottsbluff/Gering	102.0	85.1	118.7
Seward	100.4	208.7	94.5
Sidney	106.4	297.4	100.2
So. Sioux City	93.2	75.5	93.6
York	101.1	37.6	105.6

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

August 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	221.1	111.8	110.6
Commodity component	212.2	112.1	110.8
Wholesale Prices	238.1	113.1	111.4
Agricultural Prices			
United States	238.0	112.3	117.6
Nebraska	240.0	117.1	123.3

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

THE IMPACT OF RESTRICTIVE INTEREST RATES: CASES OF TENNESSEE AND ARKANSAS

Tennessee and Arkansas have had constitutional provisions restricting interest rates to 10 percent during the 1970s. Arkansas still has a 10 percent ceiling, which is considered one of the most restrictive in the United States since it allows for *no* exceptions. Tennessee's law is more flexible, and following a 1977 court case it has been vigorously enforced.

Since these two states are neighbors and since their economies are somewhat similar in structure, it is possible to gain an understanding of the probable consequences of interest rate ceilings by examining conditions in credit markets in these two states. Some of the general effects may be applicable to other states with interest ceilings, including Nebraska.

A study by the Bureau of Business Research at Memphis State University compared credit markets and conditions in Arkansas and Tennessee over the period 1967 through 1976. There was sufficient variation in interest rates over the interval—from less than 4 percent to over 13 percent in the federal funds rate—to provide a test of the ceiling's effect under different market conditions. Space considerations in this issue permit only a brief review of the Memphis study results.

As long as interest rates were below the state's 10 percent ceiling, banks had no difficulty meeting Arkansas's business credit needs. Once interest rates began to bump and exceed the ceiling, however, Arkansas had a marked reduction in the rate of business loan activity. Arkansas became a net exporter of money. The same pattern persisted in Tennessee.

An examination of the federal funds flows illustrates the effect of ceilings. When the interest rate ceiling was exceeded, Arkansas placed $203 million out of the state in the federal funds market, five times the normal amount. Capital is extremely mobile among the states, partly due to the well-developed correspondent banking network.

Nowhere is the impact of an interest rate ceiling more significant than in the consumer loan segment of the market. The ceiling on interest rates in Arkansas has completely eliminated the consumer finance industry in that state.

Interest rate ceilings have also been alleged to have an adverse impact upon consumer prices. Retailers are forced to offer credit at, say, 10 percent but may pay out-of-state creditors 12 percent or more. This differential has been alleged to have increased consumer prices by as much as 5 percent in Arkansas.

The evidence is substantial that interest rate ceilings have a negative impact upon economic development, that money flows out of states with ceilings when the market rates of interest exceed those levels, and that consumer credit is adversely affected. It is ironic that the consumers are the largest losers, since interest rate ceilings are frequently supported on the contention that low interest rates help the consumer. Low interest rates are alleged to help the consumer in that they reduce the cost of debt. Another argument for low interest rates proclaims that ceilings restrict the volume of consumer credit and thereby avoid consumer overextension.

A close scrutiny of the evidence, however, indicates that interest rate ceilings frequently have adverse consequences for the consumer. Consumer credit users are young persons with low incomes and high credit demands. These consumers usually have a low level of liquidity, and a higher degree of risk is associated in loaning to this group. Restrictive credit markets eliminate the higher risks and lower-income consumers.

It is important not to lose sight of a very basic point: the interest rate is a price established in a market. Like any other price, the function of the interest rate is to provide information or signals to producers and consumers and when necessary to perform the rationing function of allocating available funds. When interest rates are artificially restricted and not allowed to respond to market conditions, they can no longer perform their function of information and allocation of available funds.

Restricting interest rates only eliminates credits to certain consumer sectors; it may impede economic development in an area; and, if market rates rise well above ceilings, can lead to a net outflow of funds from a state. High interest rates reflect high rates of inflation, and the best insurance to protect consumers from high interest rates is to insure low rates of inflation.

DONALD E. PURSELL

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 423 December 1979

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

CONGRESSIONAL INFO SERVIC270188
7101 WISCONSIN AVENUE BR
WASHINGTON, DC 20014

U 7860-7

RECEIVED
JAN 31 1980

UNL News
Vol. 59 No. 17 January 1980 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska-Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

ECONOMIC FORECAST FOR 1980

SUMMARY

National Economy

In 1980:

- Gross National Product will show no increase in real terms.
- Inflation, as measured by the CPI, will average 10 percent.
- Unemployment will average 7.5 percent.
- Prime interest rate will decline to 11 to 12 percent.

Nebraska Economy

In 1980:

- Gross State Product will increase 1.0 percent in real terms.
- Unemployment will average 4.0 percent.
- Personal income will rise 8 to 10 percent in current dollars, 0 to 2 percent in real terms.

The new year has begun in an economic climate marked by the uncertainty that is the economic forecaster's constant companion. A looming recession is foremost in the minds of the public when the legacy of 1979 is discussed. Are we in a recession or not and, if so, who decides and when did it start? Given whatever shortcomings that it may have, the technique of answering these questions is based, at the national level, upon the movement of real Gross National Product (GNP). Two or more successive quarterly declines in real GNP establishes a recessionary period. Through the third quarter, this definition has not yet been satisfied in 1979. Though there was a decline in the second quarter, real GNP in the third quarter showed positive growth. A question then arises as to how we should characterize the situation if real GNP in the fourth quarter declines. Such a development would mean that real GNP had declined in two of the last three quarters but the declines would not be contiguous. Strict application of the above definition would say that a recession had not arrived.

THE NATIONAL ECONOMY

The above confusion on the economy's direction will be swept away if the current consensus opinion of economic forecasters becomes a reality. Most observers, including this writer, predict that the economy will experience declines in real GNP during at least the first two quarters of 1980. Some forecasters extend the recession's duration to include the third quarter of 1980 as well. In any event, real GNP over the entire year will show no growth. Very few expect that the recession will become as drawn out as the 1974 recession, which lasted five quarters in total.

Recent developments in the economy are signaling that the awaited national recession is at hand. First, the Federal Reserve Board undertook a major policy shift in early October 1979. Attention was turned away from specific interest rates as a target of policy and toward growth rates of principal monetary aggregates. The adjustment reaction by the economy took the form of interest rates being pushed to new highs. These high rates will ultimately reduce credit demands and slow the economy. In fact, this desired result is already occurring, as evidenced by recent drops in selected interest rates. Second, real disposable personal income has not grown appreciably since the fourth quarter of 1978. High levels of consumer spending were a major factor in keeping the economy out of a recession through the third quarter of 1979. There does appear to be some evidence that these expenditures are slowing down in real terms. Third, inventories of goods are apparently growing. Production will fall off when firms attempt to work these inventories off.

Other specifics of the anticipated recession include increases in the unemployment rate, with the rate averaging 7.5 percent over 1980. There will be some downward pressure on prices, but double-digit inflation will still plague the economy. Inflation, as measured by changes in the Consumer Price Index, should average about 10 percent and this assumes no radical change in the current price policies of the OPEC oil cartel. The recession should cut energy demands somewhat, but OPEC actions similar to those in 1979 would put more upward pressure on prices. Even though the predicted 10 percent rate sounds high, the 1979 rate will be from 12 to 13 percent

(Continued on page 2)

(Continued from page 1) when the final figures are in.

Interest rates have been a popular topic in recent discussions, and we should see rates declining during 1980. By year's end, the prime rate should be in the 11 to 12 percent range as credit demands soften in light of the economic slowdown. The prime rate and rates on short-term corporate obligations will seldom fall below the public's perceived inflation rate. Housing starts are directly affected by credit conditions, and it came as no surprise when they fell off sharply in the latter half of 1979. Starts will be at depressed levels through at least the first two quarters of 1980, but may possibly show some improvement toward the end of the year once interest rates on mortgage funds decline to acceptable levels.

THE NEBRASKA ECONOMY

Before automatically predicting that Nebraska will have a 1980 recession because the national economy appears headed in that direction, it would be wise to examine the historical evidence of the 1970s. Table 1 contains the growth rates, by quarter, of the broadest measures of economic activity at the national and state level, real GNP and its Nebraska analog, real Gross State Product (GSP). Following the definition of a recession used for the national economy, we will define a state recession as two or more successive quarters in which real GSP declines. Examination of Table 1 clearly shows that movements in the Nebraska economy have been more erratic during the 1970s than those of the U.S. economy. In particular, the agricultural sector of Nebraska is subject to wide swings in output on a quarterly basis, even after applying seasonal adjustment procedures. Recession periods are indicated by "R" in the table, and we see that while the U.S. economy has suffered only one recession, 1974:1-1975:1, Nebraska has had three recessions, 1970:2-1970:4, 1974:1-1974:2, and 1976:2-1976:3. Thus, the only correspondence between U.S. and Nebraska recessions occurred in 1974, when the U.S. recession was unusually severe. Even in that episode, Nebraska's behavior was distinct in that the state recession lasted only two quarters (the minimum required by our definition), while the U.S. recession extended over five quarters, [illegible]:1-1975:1. For the entire five-quarter period, the overall percentage decline in the U.S. economy was 5.7 percent, compared to 2.1 percent for the Nebraska economy. Thus, when using the five-quarter span as the frame of reference, Nebraska's economy in the 1974 U.S. recession experienced a smaller decline than the national economy. Nebraska industries which were particularly hard hit in that period included durable and nondurable manufacturing, agriculture, and, to a smaller degree, construction.

It is not certain that broad generalizations concerning the relationship between the U.S. and Nebraska economies can be made on the basis of the data in Table 1. "Rules of thumb" are seldom infallible in economics. (For instance, economists used to think that an inverse relationship between inflation and unemployment was inviolate.) It does not appear that swings in Nebraska's economy are exclusively due to swings in the U.S. economy. Furthermore, a definite lead-lag relationship has not been established and possibly may not exist. Finally, can the common experience of just one recession during the 1970s support a general rule that Nebraska will have a recession when the United States does? Rules are not typically formulated on the basis of one observation. This does not imply that historical patterns are to be ignored, however.

Table 2 contains the economic forecasts for Nebraska in 1980. For each item, the growth rate is calculated between the fourth quarters of 1979 and 1980. According to the forecast of real Gross State Product for 1980, Nebraska's economy will fare a little better than the U.S. economy, showing real growth of 1.0 percent over the year as compared to the no-growth situation for the nation. There will essentially be no real growth from 1979:4 to 1980:1 and a decline from 1980:1 to 1980:2, all figures being seasonally adjusted. This decline should be slight and, although the technical definition of a recession is not satisfied, could be characterized as a "mild" recession. The last two quarters of 1980

Table 1
ANNUALIZED PERCENTAGE RATES OF GROWTH BY QUARTER:
REAL U.S. GROSS NATIONAL PRODUCT AND NEBRASKA GROSS STATE PRODUCT

Quarter	U.S. GNP	Nebr. GSP	Quarter	U.S. GNP	Nebr. GSP	Quarter	U.S. GNP	Nebr. GSP
1970:2	0.2%	−6.2%[R]	1973:2	0.4%	1.2%	1976:2	2.5%	−8.6%[R]
1970:3	2.9	−2.8[R]	1973:3	1.7	3.3	1976:3	3.1	−5.0[R]
1970:4	−0.4	−3.3[R]	1973:4	2.0	5.5	1976:4	3.4	0.3
1971:1	8.9	15.9	1974:1	−4.0[R]	−7.2[R]	1977:1	8.6	16.7
1971:2	2.9	1.0	1974:2	−1.9[R]	−11.3[R]	1977:2	4.7	11.9
1971:3	2.8	−0.4	1974:3	−2.5[R]	2.8	1977:3	7.1	3.9
1971:4	3.4	5.9	1974:4	−4.7[R]	4.1	1977:4	2.2	26.9
1972:1	7.4	10.7	1975:1	−9.4[R]	3.3	1978:1	1.9	−24.1
1972:2	7.6	4.7	1975:2	6.2	15.9	1978:2	8.0	23.5
1972:3	5.2	−3.7	1975:3	10.1	17.5	1978:3	3.5	−23.8
1972:4	8.2	4.0	1975:4	2.6	−5.0	1978:4	5.5	33.3
1973:1	9.2	3.3	1976:1	10.3	24.8	1979:1	1.1	−4.3

R denotes recession period.

will show renewed real growth but of small magnitude, bringing the yearly growth rate to 1.0 percent.

This pattern of movement in total GSP will not apply uniformly to all Nebraska industries. (Please note that all Nebraska sectors are not separately listed in Table 2.) Durables and nondurables manufacturing will show a decrease in the real value of their outputs over 1980, with the major declines coming in the first three quarters. The construction sector will also experience a decrease in real activity. Working to offset these declines is the projected positive growth in several other sectors. The services and trade sectors will show real growth rates above the state average, although the rates cannot be characterized as spectacular. Activity in the finance, insurance, and real estate sector will show a healthy gain when compared to the state average. Declining interest rates during 1980 may support a revival of the real estate portion of that sector.

Given the sluggish performance of the state economy in the first two quarters of 1980, the unemployment rate is expected to increase to 4 percent and 4.2 percent in those respective periods. These rates are definitely higher than those posted in 1979, but do not even come close to the projected 7 to 7.5 percent national rate. As was the case with the distribution of real output among Nebraska sectors, some sectors will experience losses in employment during 1980 while others will post gains. Durables manufacturing is expected to be hardest hit, as the number of employed drops by 5 to 6 percent. Construction employment will also fall off compared to 1979 as real activity in that sector declines. On the other hand,

(Continued on page 6)

Table 2
NEBRASKA ECONOMIC FORECASTS
QUARTERLY, 1979:4 - 1980:4

	1979:4	1980:1	1980:2	1980:3	1980:4	Growth Rate (percent)
Real Gross State Product - Total (millions of 1972 dollars, SAAR[1])	10,548.6	10,564.6	10,545.2	10,600.4	10,651.7	1.0
Real GSP - Durables Manufacturing (millions of 1972 dollars, SAAR)	670.2	654.8	645.7	643.8	647.1	-3.4
Real GSP - Nondurables Manufacturing (millions of 1972 dollars, SAAR)	812.1	807.5	802.5	798.9	797.8	-1.8
Real GSP - Construction (millions of 1972 dollars, SAAR)	437.4	427.2	422.6	423.0	426.3	-2.5
Real GSP - Finance, Insurance, Real Estate (millions of 1972 dollars, SAAR)	1,806.8	1,822.5	1,847.6	1,890.0	1,917.5	6.1
Real GSP - Services (millions of 1972 dollars, SAAR)	1,025.8	1,033.6	1,040.3	1,046.7	1,052.5	2.6
Real GSP - Trade (millions of 1972 dollars, SAAR)	1,798.2	1,806.3	1,813.7	1,820.0	1,825.4	1.5
Unemployment Rate, NSA[2]	3.1	4.0	4.2	3.6	3.4	---
Employment - Durables Manufacturing (thousands, NSA)	49.7	48.3	47.5	46.3	46.9	-5.6
Employment - Nondurables Manufacturing (thousands, NSA)	45.8	45.1	45.0	45.5	46.1	.7
Employment - Construction (thousands, NSA)	30.3	24.5	30.2	32.0	29.2	-3.6
Employment - Finance, Insurance, Real Estate (thousands, NSA)	41.2	41.6	42.5	43.2	43.3	5.1
Employment - Services (thousands, NSA)	112.3	111.7	115.4	115.8	115.9	3.2
Employment - Trade (thousands, NSA)	161.2	158.2	161.9	163.0	164.3	1.9
Nebraska Personal Income (billions, SAAR)	13.712	13.938	14.132	14.412	14.891	8.6
Net Taxable Retail Sales (millions, NSA)	2,290.4	2,161.6	2,371.8	2,409.1	2,473.9	8.0
Total Housing Starts - Permit and Non-permit Issuing Areas, SAAR	1,249.3	972.7	1,159.7	2,246.1	1,754.2	40.0

---

[1] SAAR - Seasonally adjusted at annual rates.

[2] NSA - Not seasonally adjusted.

Review and Outlook

Nebraska's overall economic situation was characterized by mixed developments in September. On the one hand, the state's index of real output increased 2.0 percent from its August level and was 1.7 percent above its value of last year. (This compares favorably to the index for the nation, as output was unchanged relative to August and 1.1 percent higher than September 1978.) On the other hand, declines in several of the major Nebraska indicators may attest to an underlying weakness in the economy.

The August-to-September increase in state economic activity was concentrated in the agricultural sector, where activity rose 16.8 percent. In contrast, nonagricultural output fell 0.2 percent, with only one of the four nonagricultural sectors registering an increase. The month-to-month percentage changes for the nonagricultural sectors were: government, +2.9 percent; manufacturing, -0.4 percent; construction, -0.6 percent; and distributive, -0.7 percent.

The September drop in the nonagricultural index was a continuation of a downward movement that was begun in June. Since then, the index has fallen four consecutive months and is more than 3 percent below its peak of May 1979. All sectors have exhibited some weakness over this period, but activity in the distributive and construction sectors has consistently declined, with their indexes reaching yearly lows in September. If a recession materializes during the next few months, it is likely that the nonagricultural sectors

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

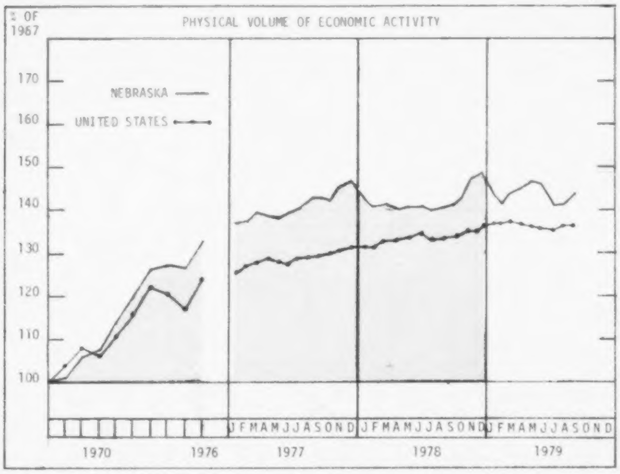
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

September 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	114.4	112.9	114.5	113.3
Agricultural	146.2	109.1	130.1	123.7
Nonagricultural	110.0	113.0	112.3	113.0
Construction	94.3	109.5	100.1	112.3
Manufacturing	116.7	117.2	117.9	117.6
Distributive	109.0	112.5	112.3	112.0
Government	110.5	107.1	108.5	107.4
Physical Volume	101.7	101.1	102.0	102.3
Agricultural	124.9	98.2	105.8	105.7
Nonagricultural	98.6	101.2	101.4	102.2
Construction	83.6	97.1	88.0	98.7
Manufacturing	103.3	103.4	106.0	105.7
Distributive	97.2	100.3	101.4	101.1
Government	103.2	101.2	99.5	100.7

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	331.6	307.3
Agricultural	351.2	273.4
Nonagricultural	328.2	308.5
Construction	314.5	293.9
Manufacturing	382.1	303.4
Distributive	318.1	319.1
Government	299.8	282.6
Physical Volume	143.9	136.1
Agricultural	142.2	113.9
Nonagricultural	144.2	136.9
Construction	114.8	107.3
Manufacturing	161.1	129.2
Distributive	142.4	142.8
Government	138.9	141.6



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

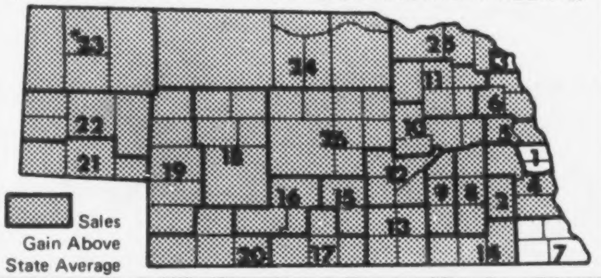
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	Sept. 1979 as percent of Sept. 1978	Sept. 1979 as percent of Sept. 1978	Year to date'79 as percent of Year to date'78
The State	96.5	97.0	100.8
1 Omaha	90.3	90.1	96.4
Bellevue	70.4		
2 Lincoln	97.4	97.7	101.1
3 So. Sioux City	94.0	89.2	93.3
4 Nebraska City	80.9	93.5	101.6
5 Fremont	96.7	94.5	102.1
Blair	87.0		
6 West Point	84.2	100.2	106.4
7 Falls City	89.7	94.9	100.1
8 Seward	96.8	102.8	103.0
9 York	100.0	101.4	107.5
10 Columbus	100.2	101.9	105.9
11 Norfolk	93.6	96.7	104.4
Wayne	118.9		
12 Grand Island	96.5	97.8	104.2
13 Hastings	93.1	94.8	101.2
14 Beatrice	102.5	100.0	104.2
Fairbury	93.8		
15 Kearney	99.2	100.8	105.5
16 Lexington	92.7	98.5	105.8
17 Holdrege	98.4	100.6	103.5
18 North Platte	88.4	89.0	103.7
19 Ogallala	97.4	96.7	104.4
20 McCook	101.3	99.1	104.0
21 Sidney	98.5	104.9	102.6
Kimball	96.6		
22 Scottsbluff/Gering	99.6	98.5	104.2
23 Alliance	107.9	104.6	103.7
Chadron	98.5		
24 O'Neill	90.5	95.6	110.3
25 Hartington	93.3	93.2	103.2
26 Broken Bow	121.1	102.4	109.6

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4) will be most affected.

The agricultural sector generally has been a source of strength for the Nebraska economy thus far during 1979. Because of its volatility, however, caution should be exercised when interpreting movement in the state physical volume index as fluctuations in agricultural activity may mask subtle trends in the economy.

In September, seasonally adjusted cash farm marketings reached a record level of $570 million, up more than $120 million from the previous month. Seasonally adjusted prices received by Nebraska farmers were 2.9 percent above their August level and were 17.1 percent above their level of September 1978.

On a year-to-date basis, the Nebraska economy appears to be experiencing some growth. Compared to the first nine months of 1978, real output has increased 2.0 percent. Output at the national level was up 2.3 percent over the same period. For both the U.S. and Nebraska economies, manufacturing and agriculture have been the strongest sectors, and construction and government the weakest.

Two additional indicators of an economy's health, employment and retail sales, have added to the confusion of positive and negative signals in the Nebraska economy. A 2.8 percent increase in employment was reported in September 1979, compared to September 1978. The gain in employment was more than 20,000 persons, but it was slightly less than the increase in the labor force so that the number of unemployed also increased. September's unemployment rate of 3.6 percent (seasonally unadjusted), however, was among the lowest in the nation and compares favorably to the national rate of 5.9 percent. Although eighteen of the twenty-six reporting cities registered increases in employment, the four cities in metropolitan counties all experienced decreases.

After adjustment for price changes, net taxable retail sales in Nebraska for September were 3.0 percent below the sales of September 1978. Retail sales at the national level recorded a 1.1 percent decline over the same period. The September decrease was felt throughout Nebraska, as sixteen of the state's twenty-six planning regions had total sales below those of last year. Moreover, non-motor vehicle sales in twenty-six of the thirty-two principal trading centers were lower than last September's sales. Broken Bow, Wayne, Alliance, Beatrice, McCook, and Columbus were the only cities reporting increases.

Relative to September 1978, the city business indexes fell an average of 2.0 percent, with only nine of the cities registering gains. Alliance posted the largest gain in activity, with an increase of 9.9 percent. Other communities with September-to-September increases were Broken Bow, Sidney, Fairbury, Seward, McCook, Kearney, Beatrice, and Columbus.

J. A. D.

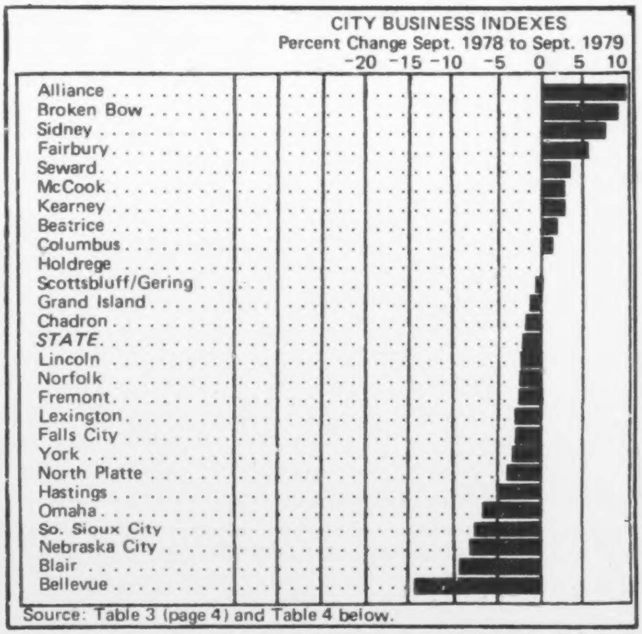
5. PRICE INDEXES

September 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	223.4	112.1	110.8
Commodity component	214.1	112.4	111.0
Wholesale Prices	241.7	113.8	111.7
Agricultural Prices			
United States	240.0	111.1	116.9
Nebraska	247.0	117.1	122.6

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change Sept. 1978 to Sept. 1979



Source: Table 3 (page 4) and Table 4 below.

4. SEPTEMBER CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.0	91.3	94.0
Alliance	121.4	57.9	105.8
Beatrice	99.8	87.4	114.7
Bellevue	95.9	30.3	92.2
Blair	95.7	57.4	98.9
Broken Bow	100.1	120.8	90.8
Chadron	98.7	48.6	125.8
Columbus	99.0	171.9	93.4
Fairbury	100.5	191.2	150.1
Falls City	100.1	150.4	96.3
Fremont	102.0	70.1	94.9*
Grand Island	104.4	75.3	94.6
Hastings	103.1	54.1	92.1
Holdrege	100.2	176.5	81.0
Kearney	107.4	105.9	97.7
Lexington	102.1	86.2	100.5
Lincoln	98.4	101.3	92.9
McCook	100.9	254.7	77.7
Nebraska City	102.2	101.2	87.1
Norfolk	101.6	131.9	83.0
North Platte	106.3	80.3	93.1
Omaha	95.9	93.3	94.6
Scottsbluff/Gering	102.8	90.0	89.1
Seward	100.7	292.8	98.5
Sidney	108.3	384.3	88.7
So. Sioux City	93.2	73.2	89.9
York	100.3	62.1	89.9

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 3)

employment in some sectors, including services, trade, and finance, insurance, and real estate, will increase as indicated in the table. Those gains will still not be enough to maintain overall state unemployment at the low rates of 1979.

Personal income, in current dollar terms, is expected to grow by almost 9 percent over the year. Growth will be sluggish in the first two quarters of 1980 before picking up in the last two quarters. When assessed in real terms (that is, deflated by a price level), personal income will show little or no real growth over the year. This conclusion depends very much upon the particular price level used for deflating the current dollar magnitude. The Consumer Price Index is quite popular in this regard, although some analysts prefer the Personal Consumption deflator published by the Department of Commerce. Net taxable retail sales in Nebraska should grow around 8.0 percent in current dollar terms over 1979:4-1980:4, a figure which is in line with the projected growth rate of personal income. As in the case of personal income, deflating the current dollar forecasts by a price index would imply that the real value of retail sales will show little or no growth during 1980.

A final note is in order. The above forecasts have implicitly assumed a stable situation in the agricultural sector of the state during 1980. There is no question that the relatively good farm prices and harvests of 1979 will be instrumental in buffering Nebraska's economy during early 1980. However, unanticipated shocks to that sector or significant changes in inventory-marketing decisions will have a marked impact upon the 1980 economic situation.

J. R. S.

COMPARISON OF 1979 FORECAST WITH ACTUAL

UNITED STATES			NEBRASKA		
Indicator	Actual	Forecast	Indicator	Actual	Forecast
GNP	2% increase[1]	1 to 2% increase	Employment	753,250[3]	760,000
Consumer Price Index	12% increase[2]	8% increase	Personal income	13% increase[4]	8 to 10% increase
Employment	98 million[2]	97 million	Real personal income	4.5% increase[5]	0 to 2% increase
Unemployment rate (average)	5.8%[2]	6.5%	Unemployment rate (average)	3.0%[3]	3.3%
Food prices	10% increase[2]	8 to 10% increase			

---

[1] Computed over 1978:3 to 1979:3.

[2] Through October 1979.

[3] Average of 1979 through September 1979.

[4] Computed over 1978:2 to 1979:2.

[5] Computed over 1978:2 through 1979:2 using the Personal Consumption Expenditures Deflator.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 424 January 1980

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

u 7860-1

RECEIVED
FEB 14 1980
UNL LIB

UNL News
Vol. 59 No. 21 February 1980 (ISSN 0149-4163)

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Business in Nebraska

Prepared by the Bureau of Business Research
College of Business Administration

1980 CENSUS OF POPULATION AND HOUSING

The Twentieth Decennial Census of Population and Housing will officially begin on Tuesday, April 1, 1980. Activities which occur around this date will reflect the culmination of approximately seven years of planning and pre-testing carried out by the U.S. Bureau of the Census. By the time the last American is counted sometime during the summer, the Bureau of the Census will have reached an estimated 222 million U.S. residents and 86 million housing units, and gathered more than 3 billion answers. Such factors as changes in the labor force and life-styles will contribute to make the task of census enumeration more difficult in 1980 than ever before.

One of the major changes in the labor force since 1970 is an increase in the proportion of working couples, which creates major problems for census enumeration. For one thing, fewer people will be available during normal working hours, necessitating more evening-hour enumerators. Also, in the past a significant proportion of the Census Bureau's temporary employees typically consisted of housewives. As a result of these changes the Census Bureau will be forced to hire a larger number of enumerators than before and, at the same time, look to different segments of the population for potential employees.

Significant changes in life-styles have also taken place since 1970. It is generally felt that in 1980 people will be harder to find. For example, illegal aliens and certain separated spouses who do not wish to be found will tend not to cooperate. Furthermore, the increasing mobility of people and changes in their type of habitat all affect the accuracy and ease of enumeration. To illustrate, more people are living in mobile homes, making recreational vehicles their permanent residence, living in commune-like arrangements, living alone, or sharing custody arrangements for dependents of divorced parents.

1980 CENSUS QUESTIONNAIRE[1]

Over the years, the U.S. Bureau of the Census has attempted to maintain consistency among the measures obtained. This has resulted in comparable questions and similar questionnaire lengths characterizing each of the decennial census survey forms. With the onset of planning for each new census, efforts are made to update and improve on the information acquired. The final decision on which questions to change is typically based on such factors as respondent burden, the public's perception of questions, census-processing work load, data comparability to previous censuses, estimates of costs, public data needs, a search for alternative sources which could provide the requested data, and so on. In the ensuing discussion, major changes pertinent to the 1980 enumeration are discussed in terms of how the 1980 census questionnaire differs from that used in 1970.

Questions which were modified to learn more about minority and ethnic groups across the nation are those dealing with race, Spanish origin, ancestry, and disability. In the race question, eight categories were added to document more adequately Asian and Pacific Islander groups residing in the United States. For the first time, a separate question on Spanish origin will be asked of all Americans.

In a break with long-standing tradition, the Census Bureau has dropped the question on place of birth of the respondent's parents and replaced it with a question designed to identify ethnic groups in the nation. The question on disability has been expanded to include not only the effect of the disability on the person's ability to work, but also the person's ability to use public transportation facilities. In addition, this question is being asked of persons of all ages rather than only of those under 65, as in 1970.

Questions on household relationship, veteran status, and type of housing unit have been modified in acknowledgment of changes in life-styles in recent years. The household-relationship question no longer requires the designation of the husband as the head of the household for a married-couple family. Rather, it specifies only that the reference person listed, or head of household, be someone in whose name the house is owned or rented.

If a dwelling place is jointly owned or rented by a married couple, either the husband or wife may be listed as the reference person. In stating this question the Census Bureau has also dropped the designation "head" because of its perceived hierarchical connotations.

For the remaining part of the household-relationship question, where the respondent is asked to list other household members and indicate their relationship to the reference person, the Census Bureau has added two new categories (Partner-Roommate and Paid Employee) to obtain more accurate statistics on unmarried people who live together.

The question on veteran status has dropped the stipulation that it applied only to men and has also been modified to make the correct response for reservists more clear. The question on type of housing unit has added the category "a boat, tent, van, etc.," in recognition of the increasingly

(Continued on page 2)

---

[1] This section is based on information presented in Mark S. Littman, "The 1980 Census of Population: Content and Coverage Improvement Plans," *Journal of Consumer Research* 6 (September, 1979), pp. 204-212; and Peter K. Francese, "The 1980 Census: The Counting of America," *Population Bulletin* 34(4) (Washington, D.C.: Population Reference Bureau, Inc., 1979).

(Continued from page 1)

diversified types of dwellings people live in.

Changes made to provide more timely information to users include new questions on (1) use of vans or trucks; (2) condominiums; (3) total shelter costs, including annual real estate taxes, annual fire and hazard property-insurance premiums, and the mortgage and monthly payment on the respondent's property; (4) average time spent getting to work; (5) extent of carpooling; (6) part-time workers; and (7) extent of unemployment in the previous year. Also, format changes were made to provide more reliable information to users on questions dealing with income earned in 1979, and foreign-language usage and English-speaking ability.

As has become the practice with the decennial census, both a long and a short form of the questionnaire will be administered. The short form will consist of seven questions on the characteristics of each person and twelve questions on living quarters. The long form will have a total of thirty-three questions on personal characteristics and thirty-two questions on living quarters.

Because of statistical reliability problems that occurred with the 1970 data for small areas, there will be some modification in the sampling procedures used in the 1980 census. It was mandatory that some changes be made, since more accurate data are needed for allocating funds under the General Federal Revenue Sharing Program. To meet this need, the short-form questionnaire will be administered to 50 percent of the housing units in governmental entities with populations of 2,500 or less. Long-form questionnaires will be given to the other 50 percent of the housing units. For all other areas the short form will be used for five-sixths of the housing units and the long form for one-sixth. This combined long-form sample of 50 percent and 16.7 percent will provide a national sample rate of approximately 20 percent in 1980, which is consistent with the 1970 sample rate.

A listing of the 100 percent items and 20 percent sample items appears in Table 1.

1980 CENSUS COVERAGE

New procedures have been designed to mitigate the problem of under-enumeration that was a major issue with respect to the 1970 census. A census in-house activity, the household roster procedure will consist of a check of individuals listed in Question 1 against the rest of the questionnaire, to ensure that they were included in all pertinent responses throughout the survey form. Any discrepancies found would be verified by Census Bureau staff. Furthermore, the Census Bureau will contact households which used all seven spaces allotted for listing household members to make certain no one was omitted due to lack of space.

Another new 1980 procedure being implemented to improve census coverage is the matching to nonhousehold sources lists. This will consist of obtaining name and address lists from independent sources. The lists will then be matched by Census Bureau staff against the census questionnaires to determine whether any people were missed in the enumeration process. If it appears that someone was missed, the status of the individual will be checked by either a telephone call or a personal visit to the listed address. This technique was used in a number of the pre-tests and was found to be effective in identifying persons missed in the initial

Table 1

SUBJECT ITEMS INCLUDED IN THE 1980 CENSUS[1]

100 Percent Items

Population

- Household relationship
- Sex
- Race
- Age
- Marital status
- Spanish/Hispanic origin or descent

Housing

- Number of units at address
- Access to unit
- Complete plumbing facilities
- Number of rooms
- Tenure (whether unit is owned or rented)
- Condominium identification
- Value of home (owner-occupied units and condominiums)
- Contract rent (renter-occupied units)
- Vacant for rent, for sale, etc., and duration of vacancy

Sample Items[2]

Population

- School enrollment
- Educational attainment
- State or foreign country of birth
- Citizenship and year of immigration
- Current language and English proficiency
- Ancestry
- Place of residence five years ago
- Activity five years ago
- Veteran status and period of service
- Presence of disability or handicap
- Children ever born
- Marital history
- Employment status last week
- Hours worked last week
- Place of work
- Travel time to work
- Means of transportation to work
- Number of persons in carpool
- Year last worked
- Industry
- Occupation
- Type of employment
- Number of weeks worked in 1979
- Usual hours worked per week in 1979
- Number of weeks looking for work in 1979
- Amount of income in 1979 by source

Housing

- Type of unit and units in structure
- Stories in building and presence of elevator
- Year built
- Year moved into this house
- Acreage and crop sales
- Source of water
- Sewage disposal
- Heating equipment
- Fuels used for house heating, water heating, and cooking
- Costs of utilities and fuels
- Complete kitchen facilities
- Number of bedrooms
- Number of bathrooms
- Telephone
- Air conditioning
- Number of automobiles
- Number of light trucks and vans
- Homeowner shelter costs for mortgage, real estate taxes, and hazard insurance

---

[1] U.S. Department of Commerce, Bureau of the Census, *1980 Census of Population and Housing* (Washington, D.C.: U.S. Government Printing Office, August, 1979).

[2] For most areas of the country in 1980, one out of every six housing units or households will receive the sample form. Areas estimated to contain 2,500 or fewer persons in 1980 will have a three-out-of-every-six sampling rate, which is required in order to obtain reliable statistics needed for participation in certain federal programs.

stage of census enumeration.

The Local Review Program was also evaluated in the data collection and coverage pre-tests. This program has been designed to provide local officials with an opportunity to review preliminary 1980 census counts before the district offices close and the figures become available to the public. Procedurally, the Local Review Program will consist of two major phases: (1) the pre-enumeration local review, and (2) the post-enumeration local review.

Phase I of the program will take place prior to Census Day (April 1, 1980). It involves a local review of addresses from a census list prepared for those areas that will be included in the 1980 mail-out/mail-back census. Along with the address lists, a set of census maps will be provided as a review aid. The maps and counts will reflect January 1, 1978 political boundaries. Local officials will be asked to review the lists and maps for completeness and return their corrections and comments to the Bureau's local offices by census day. This first phase of the local review program can be conducted only in mail census areas, since address lists for door-to-door (conventional) enumeration areas will not be available prior to census day.

After enumeration has been completed in both the mail and conventional areas, the second and major phase of the program will take place, that is, the post-enumeration local review. Preliminary population and housing counts derived from the census-day enumeration, along with replacement census maps, will be sent to local review agencies for each governmental unit and any sub-units or statistical areas within them. Both the review listings and the maps will reflect January 1, 1980 political boundaries.

In carrying out this program, the Census Bureau will be obligated to review all discrepancies reported by the local review agencies. If any problems with the counts are detected by local officials or by the district offices, field checks will be made and corrective action taken as necessary.

1980 CENSUS GEOGRAPHIC PROGRAMS

Just as the 1980 sampling procedure has been altered to provide more accurate data for small area users, a number of geographically based data-compilation programs are being set up to enhance data availability for these users. One of the new geographically based programs being incorporated into the 1980 census is the Neighborhood Statistics Program. In part, the need for this program has arisen from an increasingly predominant trend among local governments to set up legally recognized areas called "neighborhoods." Typically, the citizens of such localities elect one or more officials for the purpose of advising and assisting the neighborhood in carrying out functions related to its growth and development.

If a neighborhood is interested in participating in this program, its chief elected official or central council must make a written request to the Census Bureau. Requests will be accepted by the Bureau through December of 1980. Once the working agreement is set up, the Census Bureau will send a census-coded block map to each neighborhood requester. They will also ask the local municipality to complete a listing, referred to as a block equivalency list, which shows the code numbers for the blocks contained in each legally recognized neighborhood into which the municipality is subdivided. Such a list is important in that it recognizes that neighborhood boundaries may change over time and allows for acknowledgment of these changes before the census tabulation process begins.

A similar program being developed to aid the small area data user is the Contract Block Statistics Program. Data provided by the Census Bureau through the Contract Block Statistics Program will have essentially the same format as that available through the Neighborhood Statistics Program.

A major difference between these two programs is the allocation of costs among the local, state, and federal governments. For the Neighborhood Statistics Program, cost to the neighborhood or municipality would be minimal. Local costs would involve (1) making the written request, (2) preparing the neighborhood/block equivalency list, and (3) providing for dissemination of the data to users. The Census Bureau would carry the major costs of (1) hiring staff to carry out the program, (2) computerizing the equivalency list, (3) preparing the final tabulations and tables, and so on.

In contrast, state and local participants in the Contract Block Statistics Program will have to pay a fee to contract with the Census Bureau for block statistics in their area. Size of the fee will depend on the population of the area. The final fee will be based on actual 1980 counts, with refunds or additional charges assessed as needed.

(Continued on page 6)

Table 2

TENTATIVE RELEASE DATES FOR 1980 CENSUS REPORTS[1]

Series Number	Report Title	Expected Release
PC(1)-A	Number of Inhabitants	Dec. 1980-Apr. 1981
PC(1)-B	General Population Characteristics	Feb.-Aug. 1981
PC(1)-C	General Social and Economic Characteristics	Sept. 1981-Apr. 1982
PC(1)-D	Detailed Population Characteristics	Dec. 1981-Sept. 1982
PC(2)	[illegible]ect Reports	1982
HC(1)-A	General Housing Characteristics	Feb.-Aug. 1981
HC(1)-B	Detailed Housing Characteristics	Sept. 1981-Apr. 1982
HC(2)	Metropolitan Housing Characteristics	Dec. 1981-Sept. 1982
HC(3)	Subject Reports	1982
HC(4)	Components of Inventory Change	1982
HC(5)	Residential Finance	1982
PHC(P)	Preliminary Population and Housing Unit Counts	Aug.-Oct. 1980
PHC(V)	Final Population and Housing Unit Counts	Nov. 1980-Feb. 1981
PHC(1)	Block Statistics	Jan.-July 1981
PHC(2)	Census Tracts	Sept. 1981-Apr. 1982
PHC(3)	Summary Characteristics for Governmental Units	Sept. 1981-Apr. 1982

---

[1] U.S. Department of Commerce, Bureau of the Census, *1980 Census of Population and Housing* (Washington, D.C.: U.S. Government Printing Office, August, 1979).

Review and Outlook

October was generally a good month for the Nebraska economy, with increases in most of the major economic indicators for the state. Because cash farm marketings for Nebraska and the United States were unavailable at the time this article was being written, overall indexes and the indexes for the agricultural sectors could not be computed.[1] Based upon the physical volume index for the nonagricultural sectors, however, real output for the state increased 0.5 percent from its September level, but was 1.4 percent below its value of last year. The comparable national figures were losses of 0.6 percent and 0.2 percent, respectively.

The September-to-October increase in state economic activity resulted from a 1.1 percent increase in the distributive sector and a 0.2 percent increase in the government sector. The changes in the two remaining sectors were a 0.5 percent loss in the manufacturing sector and a 3.1 percent loss in construction.

The October increase in nonagricultural output was an encouraging development, since it followed four consecutive monthly declines. Although considerable weakness is still evident in these sectors, the marked turnaround in distributive activity makes the outlook somewhat brighter. With apparently strong Christmas sales, this sector should improve its position during the remainder of 1979 and the beginning of 1980.

(Continued on page 5)

---

[1] The graph at the bottom of this page uses an estimate for physical volume based upon movement in the nonagricultural sectors only and will be revised when additional data are available.

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

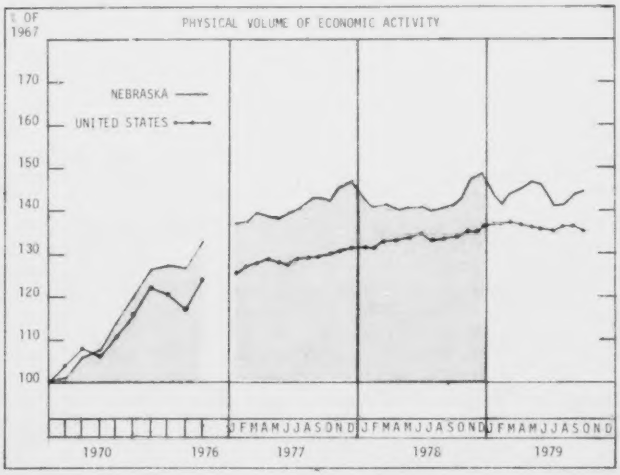
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

October 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	NA	NA	NA	NA
Agricultural	NA	NA	NA	NA
Nonagricultural	109.8	111.7	112.0	112.7
Construction	92.0	108.4	99.3	111.8
Manufacturing	116.0	115.7	117.7	116.7
Distributive	110.3	110.9	112.1	111.9
Government	104.8	107.0	108.0	107.4
Physical Volume	NA	NA	NA	NA
Agricultural	NA	NA	NA	NA
Nonagricultural	98.6	98.8	101.2	101.8
Construction	82.0	96.6	87.4	98.4
Manufacturing	102.9	101.7	105.7	104.7
Distributive	98.3	98.8	101.1	100.9
Government	99.2	101.3	99.5	100.8

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	NA	NA
Agricultural	NA	NA
Nonagricultural	332.5	310.2
Construction	308.2	294.2
Manufacturing	385.0	307.6
Distributive	324.6	318.8
Government	300.7	287.0
Physical Volume	NA	NA
Agricultural	NA	NA
Nonagricultural	144.8	136.1
Construction	111.3	106.2
Manufacturing	160.4	128.9
Distributive	144.0	141.4
Government	138.6	141.8

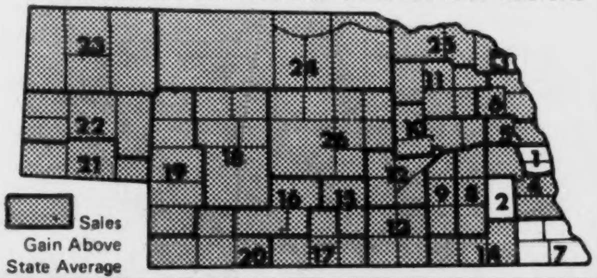


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	Oct. 1979 as percent of Oct. 1978	Oct. 1979 as percent of Oct. 1978	Year to date'79 as percent of Year to date'78
The State	100.3	100.3	100.8
1 Omaha	93.3	93.9	96.2
Bellevue	104.2		
2 Lincoln	99.9	99.0	100.8
3 So. Sioux City	98.1	94.6	93.5
4 Nebraska City	91.4	98.0	101.2
5 Fremont	98.6	97.4	101.6
Blair	93.7		
6 West Point	123.6	108.0	106.6
7 Falls City	98.7	102.7	100.4
8 Seward	128.9	113.2	104.2
9 York	105.3	99.9	106.6
10 Columbus	100.7	105.8	105.9
11 Norfolk	107.4	105.3	104.5
Wayne	109.0		
12 Grand Island	103.0	104.8	104.3
13 Hastings	96.2	102.6	101.4
14 Beatrice	102.9	95.9	103.2
Fairbury	94.8		
15 Kearney	99.4	101.4	105.0
16 Lexington	108.4	115.0	106.8
17 Holdrege	88.8	99.1	103.0
18 North Platte	99.8	100.5	103.4
19 Ogallala	106.4	114.1	105.4
20 McCook	109.6	105.5	104.2
21 Sidney	108.6	108.2	103.1
Kimball	120.7		
22 Scottsbluff/Gering	97.7	95.2	103.2
23 Alliance	107.1	104.9	103.8
Chadron	101.8		
24 O'Neill	108.0	108.3	110.0
25 Hartington	104.4	115.6	104.5
26 Broken Bow	102.9	109.2	109.6

[1] See region map below.
[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.
Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

If manufacturing continues its sporadic but steady growth, the nonagricultural index should rebound from its earlier losses.

The outlook for the agricultural sector has become cloudy during the past month. Although it was reported that Nebraska had a record harvest during 1979, the President's Soviet grain embargo adds considerable uncertainty as to the disposition and price of this harvest. Even before the President's actions, prices showed signs of weakness. In October, prices received by Nebraska farmers were 10.5 percent above prices of October 1978, but prices paid were up 13.8 percent over last year.

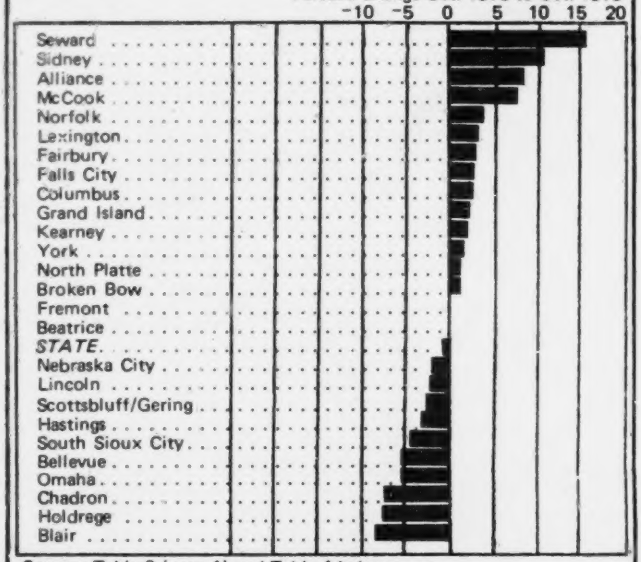
Both employment and retail sales reflected the increased pace of the Nebraska economy and continued to outpace the national trend. Employment increased 1.9 percent in October 1979, compared to October 1978. This gain in employment represented nearly 14,000 persons, but the number of unemployed also increased since the gain in employment was somewhat less than the growth of the labor force. As has been the case throughout 1979, October's unemployment rate of 3.3 percent was among the lowest in the nation and compares favorably to the national rate of 5.6 percent. Compared to October 1978, nineteen of the twenty-six reporting cities registered gains in employment. The four cities in metropolitan counties, however, all experienced declines.

After adjustment for price changes, Nebraska's net taxable sales in October were 0.3 percent above last year's level. In contrast, retail sales for the nation were 2.5 percent below those recorded last October. The October increase was felt throughout Nebraska, as seventeen of the state's twenty-six planning regions had total sales exceeding those of October 1978. Furthermore, non-motor vehicle sales in nineteen of thirty-two principal trading centers were higher than last October's sales. Seward, West Point, and Kimball recorded increases exceeding 20 percent.

Relative to October 1978, the city business indexes fell an average of 0.4 percent, with fourteen of the twenty-six cities registering gains. The weakness in building activity was responsible for much of the loss and was sufficient to offset the moderate gains in employment and retail sales.

Looking at the city business indicators, it appears that the strength of the Nebraska economy generally lies in the western and northeastern portions of the state, with metropolitan and southeastern Nebraska exhibiting considerable weakness. Seward posted the largest gain in economic activity, with an increase of 15.6 percent. Other cities with October-to-October increases larger than 5 percent were Sidney, Alliance, and McCook. J. A. D.

CITY BUSINESS INDEXES
Percent Change Oct. 1978 to Oct. 1979



Source: Table 3 (page 4) and Table 4 below.

4. OCTOBER CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.2	90.7	94.3
Alliance	120.0	64.8	91.9
Beatrice	100.7	94.4	88.2
Bellevue	96.5	31.9	96.3
Blair	97.9	52.3	76.6
Broken Bow	100.5	117.9	92.4
Chadron	98.6	40.3	63.7
Columbus	100.2	181.8	97.2
Fairbury	100.8	152.0	130.2
Falls City	101.8	176.1	101.6
Fremont	102.2	90.0	101.6*
Grand Island	104.8	76.1	101.7
Hastings	103.0	54.6	100.7
Holdrege	100.7	81.8	75.7
Kearney	108.1	100.5	90.1
Lexington	102.6	96.2	90.6
Lincoln	98.1	79.5	95.4
McCook	101.1	268.7	86.9
Nebraska City	102.3	126.0	94.4
Norfolk	101.4	123;1	92.7
North Platte	106.1	85.7	96.6
Omaha	96.5	90.3	94.5
Scottsbluff/Gering	102.9	88.5	77.4
Seward	99.0	278.5	100.0
Sidney	108.3	299.8	88.2
So. Sioux City	93.4	72.4	101.2
York	100.9	72.1	104.2

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

October 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	225.4	112.2	110.9
Commodity component	215.6	112.4	111.1
Wholesale Prices	245.2	114.1	112.0
Agricultural Prices			
United States	NA	NA	NA
Nebraska	NA	NA	NA

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(Continued from page 3)

The statistics provided by the Census Bureau through these programs will be available for individual blocks in blocked areas which are (1) urbanized, (2) incorporated places with a current population of 10,000 or more, and (3) other areas that have entered into a contract with the Bureau to have block-by-block tabulations computed at their own expense. The block statistics will include information from the short-form questionnaire but not from the long-form questionnaire. Data from the long-form questionnaire will be put on computer tape by the Census Bureau and made available to local areas on a special arrangement basis. Other available information will include (1) guides on use of the data, (2) case studies to illustrate applications, and (3) data-user workshops.

This is the first time in which the Census Bureau will make block statistics data routinely available for small areas. Previous censuses reported such detailed statistics only for urbanized areas. This represents a significant effort by the Census Bureau to provide more useful information for small area data users.

1980 TABULATION/PUBLICATION AND SUMMARY TAPE SCHEDULE

The Census Bureau is well aware of the need to compile and release 1980 census data at the earliest possible date. Their primary concern is to meet the reapportionment and redistricting information deadlines which are set by law: (1) by January 1, 1981, a complete tabulation of the total population in each state must be available for apportioning seats in the House of Representatives, and (2) by April 1, 1981, officials in each state must be provided with small area breakdowns of the state's total population for legislative districting purposes.

At the same time as these mandatory tabulations are being produced, the Census Bureau hopes to compile at least some of the 100 percent tabulations of characteristics. The tentative publication program for the 1980 Printed Statistical Reports is listed in Table 2 (page 3).

A major portion of 1980 census results will be provided in a set of five summary tape files or tabulation counts. These summary tape files are being designed to provide data with greater subject and geographical detail than it is possible to publish in the printed reports. The Census Bureau will provide this information—subject to the suppression of certain detail where necessary to protect confidentiality—on magnetic computer tape, printouts, and microform at the cost of preparing the copy. In addition, most states have at least one Summary Tape Processing Center designed to assist data users in obtaining information contained in these files. The Census Bureau is presently working on an outline of the contents of these files.

CONCLUSION

It is apparent that the Census Bureau has been actively involved with extensive planning of organizational procedures in anticipation of the 1980 census. They have carefully weighed the costs (financial outlay) and benefits (completeness and accuracy of the data obtained, along with the usefulness of these data for users) involved with each of the proposed procedures. As an attempt to offset some of the costs associated with the procedures being added to improve coverage, the mail-out/mail-back system will be used for approximately 90 percent of the population, as opposed to its use for 60 percent of the cases in 1970.

The 1980 census is expected to cost close to $990 million, or around $4 per head. This is roughly $3 more per person than was spent for the 1970 census. The $3 difference is accounted for as follows:

$1.00	Inflation
.75	Direct efforts to improve coverage
.50	Improvements in field administration
.25	New data needs
.25	Certain enhancements in geographic and processing operations
.25	Change in living arrangements

Of the increase in budget that has been apportioned for the 1980 census, approximately $200 million will go for new and intensified procedures specifically designed to improve coverage. It is expected that the 1980 census will be more complete than it would have been without these new and improved coverage techniques. Unfortunately, given changes in social and economic conditions, it is difficult to predict the success of these measures. The difficulty is compounded by the possibility of increased respondent resistance to any type of survey, especially a government-sponsored survey. These factors, combined with a dramatic increase in the amount of data that must be handled in conjunction with the 1980 census, pose a major challenge to those involved in enumeration activities.

A. M. R.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 425 February 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

RECEIVED
FEB 14 1980

E KIANKA 270238
CONGRESSIONAL INFO SERVIC 8R
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

U 7860-1 A

RECEIVED
APR 14 1980

UNL News

Vol. 59 No. 24 March 1980 (ISSN 0149-4163)

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Business in Nebraska

Prepared by the Bureau of Business Research
College of Business Administration

GENERAL FUND REVENUE FORECASTS 1980-1981

There can be little doubt in anyone's mind that the nation is experiencing a period of economic uncertainty. For more than a year, economists have been predicting a recession which has so far failed to materialize. The beginning of the long-expected economic downturn has now been moved forward into 1980, although forecasters are hesitant to indicate which quarter. Galloping inflation continues at a double-digit pace, eroding the purchasing power of the consumer's dollar and prompting the increasingly voiced complaint that wages and salaries are not keeping up with rising prices.

In addition to our domestic woes, recent events of an alarming nature have occurred on the international scene. The invasion of Afghanistan by the U.S.S.R. heralds the probable onset of another cold-war period, while the embassy takeover in Iran has set a dangerous precedent for future violations of international law.

Although the present difficulties may appear to be overwhelming, we can derive comfort from the fact that our predecessors have experienced similar fears and uncertainties. Accepting this, we realize that life and business must go on as usual. People will continue to face the inevitability of death, and taxes must be collected to finance the institutions and operations of government. With this somewhat gloomy preamble stated, we now turn to a description of the revenue forecasting component of the taxation process.

To establish realistic budget constraints, state planners must have an accurate estimate of future tax receipts. These forecasts are necessary for setting tax rates and planning appropriations. In Nebraska, forecasting general fund tax receipts is an official duty of the Department of Revenue.

During times of stability, preparing revenue forecasts is a relatively simple task that can usually be carried out with trend analysis. However, during economically uncertain times, trend analysis does not perform well. Disruptive events, such as tax cuts, recessions, double-digit inflation, declining real income, fluctuating farm prices, and the like, must be given due consideration in the forecasting process. Quantitative methods must be used that will capture the effects of these events on future tax collections. A forecasting methodology that is currently being used by many states is the econometric model with linkages between regional variables and national variables. This methodology has proved to be successful, as it models the behavior of the regional economy while considering the effects of events occurring at the national level.

To provide tax receipts forecasts independent of the Nebraska Department of Revenue, the Bureau of Business Research has constructed a small-scale econometric model designed specifically to provide revenue forecasts for Nebraska. The model was developed last year, and the basic structure was described in the March 1979 issue of *Business in Nebraska.* The model has been revised and updated in order to prepare the forecasts that follow.

The principal objectives of this article are to review previous revenue forecasts and to present tax receipts forecasts for fiscal year 1980-1981. The track records of the Nebraska Department of Revenue and the Bureau of Business Research will be reviewed for calendar year 1979. Forecasted and actual receipts will be compared and attention will be focused on the accuracy of the forecasts. Gross general fund tax receipts forecasts for the upcoming fiscal year will be presented for the following tax categories: (1) individual income tax, (2) sales and use tax, (3) corporation income tax, and (4) miscellaneous taxes. Additional revenue sources and projected refunds will be used to forecast net tax receipts.

The following narrative should provide the layperson with an overview of the revenue forecasting process. The results and conclusions that follow are not intended to reflect negatively on forecasts prepared by the Nebraska Department of Revenue. They are presented only as an independent and separate viewpoint.

ACCURACY OF FORECASTS

Almost all forecasts are subject to error, as it is practically impossible to predict the future with complete accuracy. Consequently, forecasters must be prepared to encounter criticism when their forecasts are presented to the public. If the error remains small, little comment is usually forthcoming. However, if the error is consistently large, immediate attention is focused on the credibility of the forecasts. Since there is practically nothing that can be done to eliminate the error in forecasting, the model used to generate the forecasts should be continually revised and updated, as this will tend to minimize the error over time. Different assumptions and new data are used to alter the model's structure and provide subsequent forecasts that more accurately reflect current and future economic conditions.

Forecasting error is mathematically defined to be the difference between actual tax receipts and forecasted tax receipts for a single time period or group of time periods. This is expressed by the following formula:

$$\text{error} = \text{actual receipts} - \text{forecasted receipts}.$$

The error is positive or negative depending on the relative magnitude of the actual and forecasted

(Continued on page 2)

(Continued from page 1)

receipts. In other words, if actual receipts exceed forecasted receipts, the error is positive. The opposite situation would yield a negative error. If the forecasting model is theoretically sound, the magnitude and numerical sign of the error terms will usually fluctuate in a random fashion. Extremely large error terms or consecutive strings of error terms with the same numerical sign indicate a weakness in the model. The long-run error is a measure of the error over an extended number of time periods, and should approach zero as the number of time periods increases.

The error can also be expressed as a percentage of actual receipts by the following formula:

percentage error = 100 x (error ÷ actual receipts).

The percentage error is also a measure of the magnitude and direction of the forecasting errors. In the following two tables, error terms are computed using the preceding formulas.

When the errors and percentage errors are compiled over an extended period of time, the result is often referred to as a "track record." The errors for the individual time periods, as well as the error for the extended time period, indicate the degree of accuracy in the forecasts. If the track record indicates a high degree of inaccuracy, the forecasting model should be revised or replaced. Even if the track record is considered to be good, the model should be periodically updated as new data become available and prior assumptions are discarded.

For the calendar year 1979, the track records of the Bureau of Business Research and the Nebraska Department of Revenue are presented in Table 1 and in Table 2, respectively. Comparative monthly errors are considerably different, since forecasting models were developed independently by each organization. Although several of the monthly errors are sizable in both sets of forecasts, the majority of the monthly errors are quite small. The total error is 1.6 percent for the Bureau of Business Reserach and 3.2 percent for the Nebraska Department of Revenue. In both forecasts, consideration of the individual errors and the total error indicate an acceptable degree of accuracy.

Table 1
COMPARISON OF ACTUAL GENERAL FUND TAX RECEIPTS
WITH PROJECTED TAX RECEIPTS
BUREAU OF BUSINESS RESEARCH
(thousands of dollars)

1979	Actual Receipts	BBR Projections*	Difference	Percent Difference
January	57,231	54,823	2,408	4.2
February	55,649	56,264	-615	-1.1
March	56,168	60,533	-4,365	-7.8
April	74,737	72,929	1,808	2.4
May	60,006	57,867	2,139	3.6
June	55,225	54,740	485	0.9
July	55,723	46,794	8,929	16.0
August	53,206	53,564	-358	-0.7
September	53,978	55,914	-1,936	-3.6
October	53,507	47,560	5,947	11.1
November	50,566	49,709	857	1.7
December	50,364	54,841	-4,477	-8.9
Total:	676,360	665,538	10,822	1.6

---

*The projections of the Bureau of Business Research were prepared in December 1978, and published in quarterly format in the March 1979 issue of *Business in Nebraska.*

A few additional comments are appropriate concerning the accuracy of the monthly forecasts. The forecasting model used by the Bureau of Business Research is a quarterly model. The reasons for this are that (1) monthly data series at the state level are scarce; (2) Nebraska personal income, an important variable in the state model, is reported quarterly; and (3) the Chase national macroeconomic model, to which the Nebraska tax model is linked, is a quarterly model.

Quarterly tax receipts forecasts are generated and then converted to monthly forecasts using seasonal factors obtained from the original monthly tax data. Because of this additional step, monthly forecasts should be accepted with reservations since optimal reporting of tax receipts forecasts would be on a quarterly basis, the same as the tax model.

FORECASTS FOR FISCAL YEAR 1980-1981

The Nebraska economy is interrelated with the national economy, and events that occur at the national level have an effect on the state economy. Sometimes the effects are felt immediately, while at other times there is a lagged effect. The national model that provides exogenous inputs to the Nebraska model is important in generating state tax receipts forecasts.

To generate the Nebraska revenue forecasts, an econometric model was developed utilizing exogenous inputs from the Chase macroeconomic model. National exogenous variables used in the model are Personal Income, Disposable Personal Income, Personal Consumption Expenditures for Nondurables and Services, Cash Farm Marketings, and Transfer Payments. Forecasts of these variables were taken from the standard Chase macroeconomic

Table 2
COMPARISON OF ACTUAL GENERAL FUND TAX RECEIPTS
WITH PROJECTED TAX RECEIPTS
NEBRASKA DEPARTMENT OF REVENUE
(thousands of dollars)

1979	Actual Receipts*	DOR Projections**	Difference	Percent Difference
January	57,231	52,210	5,021	8.8
February	55,649	54,971	678	1.2
March	56,168	57,515	-1,347	-2.4
April	74,737	69,639	5,098	6.8
May	60,006	59,211	795	1.3
June	55,225	54,274	951	1.7
July	55,723	48,711	7,012	12.6
August	53,206	52,412	794	1.5
September	53,978	52,633	1,345	2.5
October	53,507	52,114	1,393	2.6
November	50,566	47,164	3,402	6.7
December	50,364	53,880	-3,516	-7.0
Total:	676,360	654,734	21,626	3.2

---

*Actual general fund tax receipts data were obtained from the Nebraska Department of Revenue.

**The DOR (Department of Revenue) projections are from *Nebraska Department of Revenue Report to the State Board of Equalization and Assessment,* June 4, 1979 and November 15, 1979.

forecast of January 22, 1980.

The standard forecast prepared by Chase assumes the following conditions will prevail during the forecast period:

- Real GNP will decline by 1.2 percent for 1980, with a very modest recovery of 2.2 percent in 1981.
- Inflation will subside later in 1980, but prices will still increase by about 10 percent from year-end 1979 to year-end 1980.
- Unemployment will increase during 1980 to a near 8 percent rate by year end.
- Corporate profits will decline 8.4 percent in 1980 as the economy weakens.
- Real disposable personal income will decline through the third quarter of 1980, and then begin to recover.
- Short-term interest rates will decline through most of 1980.

The above assumptions are not unshakable and any changes would obviously affect the values of the exogenous inputs.

The standard forecast of an economic slowdown during 1980 is assigned the greatest probability of occurrence. The Nebraska economy usually lags the national economy by one or two quarters. Hence, the occurrence of a national recession during 1980 would probably not have full effect on the state economy until the second half of the upcoming fiscal year.

The Nebraska tax model generates seasonally adjusted forecasts on a quarterly basis. State tax receipts are recorded as a monthly series and are seasonally adjusted as such. Using the resulting seasonal factors, the original quarterly forecasts are converted to a seasonally unadjusted monthly cash flow.

Monthly forecasts of gross general fund tax receipts for fiscal year 1980-1981 are presented in Table 3. Tax rates are assumed to be 3 percent for the sales tax and 17 percent for the income tax. These forecasts do not include the June 30, 1980 ending balance in the general fund, revenue sharing funds, or sales and income tax refunds.

Bureau of Business Research estimates set actual and projected receipts for the current fiscal year at $699.6 million. This takes into account the withholding tax moratorium of last December and the 1 percent reduction in the individual income tax rate, effective January 1, 1980. Gross receipts for the upcoming fiscal year are forecasted to be $753.7 million, a 7.7 percent increase.

Table 3
FORECASTED GROSS GENERAL FUND TAX RECEIPTS
FOR NEBRASKA, FISCAL YEAR 1980-1981
BUREAU OF BUSINESS RESEARCH
(thousands of dollars)

	Income Tax	Sales/Use Tax	Corporation Tax	Miscellaneous Tax	Total Tax
July	16,270	23,520	2,459	11,822	54,071
August	21,028	28,165	2,117	5,221	56,531
September	20,647	23,371	10,108	4,008	58,134
October	16,252	28,431	3,517	5,292	53,492
November	20,291	24,707	1,991	4,294	51,283
December	16,712	25,771	10,220	5,058	57,761
January	28,583	30,521	3,222	4,085	66,411
February	33,823	26,240	2,696	3,203	65,962
March	28,884	23,603	12,271	3,932	68,690
April	50,063	22,392	10,004	4,140	86,639
May	22,726	26,721	2,624	17,725	69,796
June	23,267	25,625	11,299	4,726	64,917
Total:	298,546	309,067	72,568	73,506	753,687

If the economic slowdown intensifies and double-digit inflation continues unabated, consumers will eventually deplete their savings and be forced to retrench, and this would have an adverse effect on future tax receipts.

NET RECEIPTS

Forecasting gross tax receipts is relatively easy when compared to the problem of projecting net receipts. Factors influencing the net outcome are subject to extreme variability. Net receipts are defined to be the difference between total general fund revenues and refunds. General fund revenues include gross tax receipts, the ending general fund balance as of June 30, 1980, and revenue sharing funds. Refunds are generated from the individual income tax, sales tax, city sales tax, food sales tax credit, and corporation tax.

The Nebraska withholding tax is currently 17 percent of federal withholding. Hence, state income tax refunds are dependent upon the withholding rates of the federal government. During 1979, overwithholding apparently occurred, and this was the primary reason for the Nebraska withholding tax moratorium of December 1979. For the upcoming fiscal year, income tax refunds are forecasted to be $59.4 million.

City sales tax refunds go to Nebraska cities that have approved a sales tax rate greater than the 3 percent rate mandated for the state. Participating cities and their rates are Omaha (4.5 percent), Lincoln (4 percent), Bellevue (4 percent), and North Platte (4 percent). Several other Nebraska communities are now considering an increase in their sales tax rates as one means of reducing the property tax burden. Projected city sales tax refunds for fiscal year 1980-1981 are $49.9 million.

The food sales tax credit is currently $20 per person, which generates approximately $30 million in refunds. However, the state legislature is considering an increase in the food tax credit to $28 per person, which would provide an additional $12 million in tax relief.

Other refunds are from the sales tax and corporation tax. Together, these refunds will be about $9.1 million. Deficiency appropriations for the current fiscal year are expected to be approximately $9.0 million. All refunds and deficiency appropriations will total approximately $157.6 million with a $20 food tax credit. If the food tax credit is increased to $28, refunds are forecasted to be $169.5 million.

Total general fund revenues are projected to be $753.7 million in gross tax receipts, $15.0 million in revenue sharing funds, and a general fund balance of $38.8 million as of June 30, 1980. Together, these equal $807.5 million. When refunds and deficiency appropriations are subtracted, projected net receipts are $649.8 million if the food tax credit is $20. A food tax credit of $28 would yield net receipts of $638.0 million. The derivation of net general fund tax receipts forecasts is presented in more detail in Table 4 (page 6).

General fund spending financed by state revenues has been set at $608.3 million for fiscal year 1980-1981. The overlevy is the amount by which projected net receipts exceed spending, expressed as a percentage of spending. State guidelines indicate that the overlevy should fall between

(Continued on page 6)

Review and Outlook

The level of economic activity in Nebraska dropped in November 1979, with four of the five sectors recording losses when compared to October. The physical volume index for the state fell 0.9 percent from its October level and was 3.0 percent below its value of last year. Nationally, the index rose 0.1 percent from October, but was down 0.4 percent from November 1978.

The October-to-November decrease for Nebraska was broadly based, with decreases in both the agricultural and nonagricultural sectors. The index for the agricultural sector fell 0.5 percent, and the composite index for the nonagricultural sectors fell 1.0 percent. Government, with an increase of 1.5 percent, was the only sector registering a gain. The month-to-month losses for the remaining sectors were: construction, -2.3 percent; distributive, -1.4 percent; and manufacturing, -0.9 percent.

The year-to-year changes presented in Table 1 should be interpreted with a degree of caution. Even though the indexes were considerably lower than last November, it must be remembered that November 1978 was an unusually good month for the state (see chart at bottom of page). Despite November's loss, the Nebraska economy has exhibited a slight increase, on a year-to-date basis, and should finish the year about 1 percent above 1978.

The manufacturing sector has expanded steadily throughout the year, as output has fallen only four times. The index for the manufacturing sector was 2.9 percent above its November 1978 level and was the only sector increasing.

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

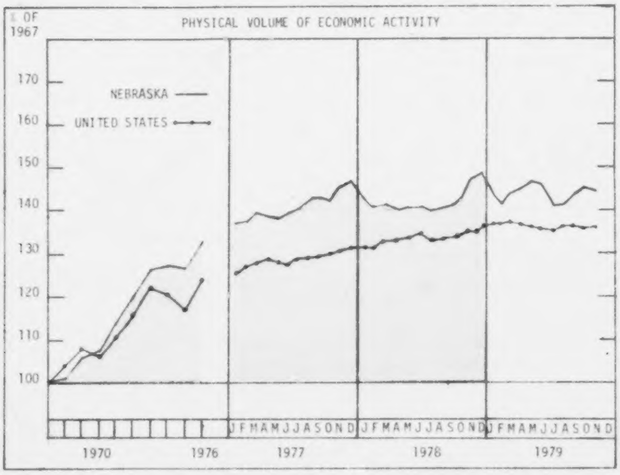
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

November 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	108.5	111.6	113.7	112.9
Agricultural	105.6	113.1	126.7	121.8
Nonagricultural	109.1	111.5	111.8	112.6
Construction	90.4	107.0	98.5	111.3
Manufacturing	116.7	115.3	117.9	116.6
Distributive	109.3	111.0	111.8	111.8
Government	103.4	106.9	107.4	107.3
Physical Volume	97.0	99.6	101.4	101.7
Agricultural	93.1	102.5	105.1	105.4
Nonagricultural	97.8	99.5	100.9	101.6
Construction	81.3	96.2	86.8	98.1
Manufacturing	102.9	101.1	105.7	104.3
Distributive	97.0	98.6	100.7	100.7
Government	98.8	101.3	99.3	100.8

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	338.7	313.1
Agricultural	368.5	305.6
Nonagricultural	333.5	313.3
Construction	301.2	293.3
Manufacturing	394.4	310.5
Distributive	323.5	322.9
Government	301.8	288.5
Physical Volume	144.3	136.0
Agricultural	145.7	124.2
Nonagricultural	144.1	136.4
Construction	108.4	105.5
Manufacturing	163.0	129.3
Distributive	142.2	141.9
Government	138.5	141.8



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

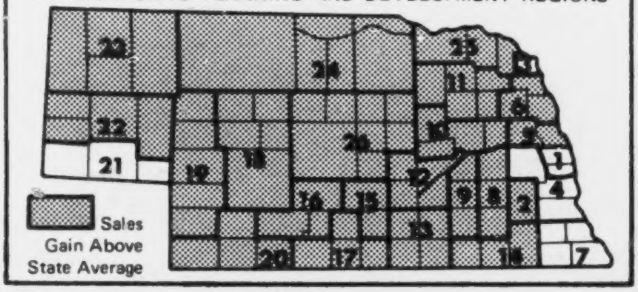
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	Nov. 1979 as percent of Nov. 1978	Nov. 1979 as percent of Nov. 1978	Year to date'79 as percent of Year to date'78
The State	98.4	97.2	100.4
1 Omaha	100.9	98.7	96.4
Bellevue	87.2		
2 Lincoln	97.7	97.5	100.5
3 So. Sioux City	83.6	87.1	92.9
4 Nebraska City	89.5	92.0	100.4
5 Fremont	97.4	97.0	101.1
Blair	102.5		
6 West Point	117.4	93.3	105.3
7 Falls City	93.2	90.8	99.5
8 Seward	84.1	88.6	102.6
9 York	102.8	97.5	105.7
10 Columbus	98.6	93.3	104.7
11 Norfolk	100.9	97.3	103.8
Wayne	102.0		
12 Grand Island	100.4	98.8	103.7
13 Hastings	94.3	92.7	100.6
14 Beatrice	94.8	94.0	102.3
Fairbury	94.5		
15 Kearney	97.1	91.5	103.7
16 Lexington	106.0	94.5	105.6
17 Holdrege	83.6	89.1	101.7
18 North Platte	94.6	95.8	102.7
19 Ogallala	102.7	101.5	105.1
20 McCook	107.0	106.3	104.3
21 Sidney	98.2	101.5	99.6
Kimball	126.7		
22 Scottsbluff/Gering	102.8	100.0	102.9
23 Alliance	102.2	102.2	103.7
Chadron	110.8		
24 O'Neill	96.9	97.4	110.8
25 Hartington	110.2	101.5	104.2
26 Broken Bow	102.1	95.6	108.1

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

The agricultural sector has been another area of strength in the Nebraska economy during 1979. This month's fall in the index (as measured by the volume of seasonally adjusted cash farm marketings) was only the fourth decline this year. Prices received by Nebraska farmers in November were up 13.5 percent when compared to last year, but prices paid increased 13.7 percent over the same period.

Construction continues to be the weakest sector in the Nebraska economy. The index for this sector has fallen steadily throughout 1979 and lies 18.7 percent below the level of 1978.

The distributive and government sectors have been the most erratic sectors in the Nebraska economy. In November, the indexes for both sectors were less than last year, but definite trends have not been established.

Employment continued its record of growth in 1979, as the number of employed persons increased 1.5 percent in November 1979, compared to November 1978. This gain represented more than 11,000 persons, but was insufficient to offset the increase in the labor force and resulted in a slight increase of the number of unemployed. Despite this fact, November's unemployment rate was only 3.2 percent of the labor force and compares favorably to the national rate of 5.6 percent. Compared to November 1978, nineteen of the twenty-six reporting cities registered gains in employment. The four cities in metropolitan areas all experienced decreases.

After adjustment for price changes, Nebraska's net taxable sales in November were 2.8 percent below last year's level. Retail sales for the nation were 3.9 percent below those of last November. The November decrease was spread throughout Nebraska, as twenty of the state's twenty-six planning regions had total sales below those of November 1978. Non-motor vehicles sales, however, were less affected, as only sixteen of the thirty-two principal trading centers had sales lower than those of last November. Kimball, West Point, Chadron, and Hartington recorded increases exceeding 10 percent.

Relative to November 1978, the city business indexes rose slightly, with an average increase of 0.1 percent, as fifteen of twenty-six cities registered gains. The strength in employment was responsible for most of the gain, but could not fully offset the weakness in retail sales and building activity.

Based on the city business indicators, it appears that the strength of Nebraska's economy continues to lie in the western portion of the state. The city posting the largest gain in activity, with an increase of 7.2 percent, was McCook. Other cities with November-to-November gains exceeding 3 percent were Alliance, Sidney, Lexington, Scottsbluff/Gering, and Norfolk. J. A. D.

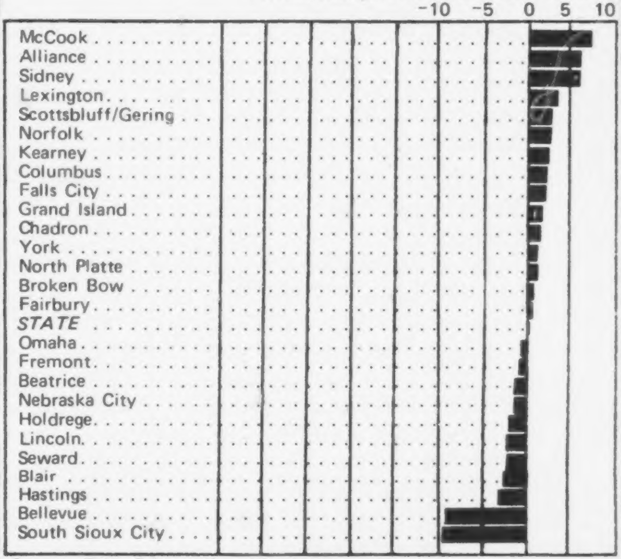
5. PRICE INDEXES

November 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	227.5	112.6	111.1
Commodity component	217.4	112.7	111.3
Wholesale Prices	246.9	114.5	112.2
Agricultural Prices			
United States	246.0	110.3	115.4
Nebraska	253.0	113.5	120.6

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change Nov. 1978 to Nov. 1979



Source: Table 3 (page 4) and Table 4 below.

4. NOVEMBER CITY BUSINESS INDICATORS

The State and Its Trading Centers	Employment[1]	Building Activity[2]	Power Consumption[3]
	Percent of Same Month a Year Ago		
The State	101.8	89.0	105.4
Alliance	114.5	59.9	113.2
Beatrice	101.7	97.0	99.4
Bellevue	97.8	42.2	105.9
Blair	97.3	48.7	106.0
Broken Bow	101.5	80.4	103.0
Chadron	99.3	38.9	120.2
Columbus	101.0	186.9	101.9
Fairbury	101.6	132.4	108.7
Falls City	102.4	273.3	97.7
Fremont	98.5	95.3	108.9*
Grand Island	105.6	73.8	111.2
Hastings	103.7	52.8	107.2
Holdrege	101.5	52.2	166.1
Kearney	108.5	96.5	107.4
Lexington	103.3	80.1	108.7
Lincoln	99.2	65.7	106.7
McCook	101.5	271.5	94.3
Nebraska City	103.1	146.3	96.6
Norfolk	102.1	111.8	113.8
North Platte	107.8	100.3	102.9
Omaha	97.8	91.9	102.1
Scottsbluff/Gering	103.7	92.5	108.5
Seward	100.9	189.2	108.2
Sidney	108.9	212.6	95.7
So. Sioux City	94.4	58.7	113.7
York	102.3	69.0	108.7

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 3)

3 percent and 7 percent, inclusive. If the overlevy falls outside these ranges, corrective measures could include changes in appropriations or adjustment of the tax rates. For the scenario of the $20 food sales tax credit, the Bureau of Business Research's projected overlevy is $41.5 million (6.8 percent). If the $28 food tax credit is approved, the overlevy is projected to be $29.7 million (4.9 percent). With an increase in the food tax credit, the Bureau's forecasts indicate that the total revenue sources for the next fiscal year will yield an overlevy in the mid-range category.

CONCLUSION

The preceding sections have outlined the basic procedures involved in forecasting both gross and net general fund tax receipts. Forecasts are based on expectations of future economic events, and these expectations are subject to change as time passes. If these assumptions radically change, actual events will begin to deviate extremely from the forecasts.

It is impossible to consider every factor that has an impact on tax receipts. The forecasts presented in this article must be viewed with this in mind. Factors to pay close attention to in the upcoming months are the severity of the economic slowdown and the behavior of agricultural prices. A combination of consumer retrenchment and a decline in agricultural prices would have a negative impact on Nebraska tax receipts. C. L. B.

Table 4

FORECASTED NET GENERAL FUND TAX RECEIPTS FOR NEBRASKA
FOOD SALES TAX CREDIT OF $20*
BUREAU OF BUSINESS RESEARCH

Total Revenues	
Gross Tax Receipts	$753,687,000
Ending Balance	38,800,000
Revenue Sharing	15,000,000
Total:	$807,487,000

Refunds	
Income Tax	$59,400,000
City Sales Tax	49,855,000
Food Sales Tax	30,305,000
Corporation Tax	5,433,000
Sales Tax	3,650,000
Total:	$148,643,000

Total Revenues	$807,487,000
minus Refunds and Deficiency Appropriations	$157,643,000
equals Net Receipts	$649,844,000

---

*If the food sales tax credit is increased to $28, total refunds and deficiency appropriations are projected to be $169,449,000, leaving net receipts of $637,988,000.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 426 March 1980

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFC SERVIC . BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

RECEIVED
10 1980
U 7860-1 UB

UNL News
Vol. 59 No. 30 April 1980 (ISSN 0149-4163)

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Business in Nebraska

Prepared by the Bureau of Business Research
College of Business Administration

NEBRASKA PERSONAL INCOME

The Bureau of Economic Analysis (BEA) of the United States Department of Commerce has estimated that total personal income in Nebraska during the third quarter of 1979 was $13.6 billion on a seasonally adjusted, annual rate basis (Table 1). This represents an increase of 2.4 percent from the second quarter of 1979, and an increase of 13.6 percent from the third quarter of 1978. In comparison, personal income for the nation as a whole increased 2.8 percent from the second quarter 1979, and increased 11.7 percent from the third quarter of 1978.

Because of rapidly increasing prices during this period, however, the seemingly large increases in the current-dollar value of personal income can be extremely misleading. Prices in the third quarter 1979, as measured by the Consumer Price Index (CPI), rose 3.0 percent above second-quarter prices and were 11.7 percent higher than the third quarter of 1978. Although the use of the CPI to measure inflation has been seriously questioned recently, it is apparent that the growth in personal income between the second and third quarters of 1979 was insufficient to fully offset increasing prices, at both the state and the national levels.[1] On the other hand, it is obvious that Nebraska has recorded moderate growth in real personal income between 1978 and 1979.

COMPOSITION OF PERSONAL INCOME

Personal income is the current income received by all persons from all sources. It consists of private and government wage and salary payments in cash and in kind; other labor income; farm and nonfarm proprietors' income; property income from interest, net rents, and dividends; and transfer payments; less personal contributions for social insurance, and adjusted for place of residence. It is measured before the deduction of personal income and other personal taxes and is expressed in current dollars, and has no directly applicable index that can be used to convert it into real dollars.

Table 1 and Table 2 (p. 2) present personal income and its major components. Data in Table 1 are quarterly values, expressed on an annual rate basis in current dollars, for the years 1978 and 1979. As can be seen in this table, personal income increased steadily over this period. In the first and third quarters, however, the growth was illusionary as consumer prices rose at higher rates.[2] The three major components of personal income also grew steadily over this period, except for the first quarter of 1978 when labor and proprietors' income fell.

Table 1
ANNUAL ESTIMATES OF PERSONAL INCOME
BY QUARTER, 1978-1979
(seasonally adjusted in millions of current dollars)

	1978.1*	1978.2	1978.3	1978.4	1979.1	1979.2	1979.3
Personal Income	11,099	11,693	11,942	12,737	12,774	13,246	13,566
Net Labor and Proprietors' Income by Place of Residence	7,754	8,290	8,406	9,092	9,026	9,390	9,545
Dividends, Interest, and Rent	2,028	2,074	2,157	2,235	2,307	2,371	2,431
Transfer Payments	1,316	1,329	1,379	1,410	1,441	1,485	1,590

*Numbers after decimal refer to quarter, that is, .1 - first quarter; .2 - second quarter, etc.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table 2 summarizes the components of personal income and their relative importance during the period 1969 to 1979. Data for the years 1969 through 1978 are annual averages, while 1979 data represent an annual estimate based upon results through the first three quarters of 1979.

Personal income has increased steadily and constantly over the 1969-79 interval. During this time period, personal income was up 165 percent. The year-to-year gains are not consistent, but there is a basic underlying growth in Nebraska's personal income.

Much of the variability in personal income is illustrated by looking at labor and proprietors' income, personal income's major component. It also showed steady growth from 1969 through 1979, but was much more erratic. Even though labor and proprietors' income increased 152 percent during this period, the rates of change varied considerably

(Continued on page 2)

---

[1] Because of its construction, the CPI tends to overstate changes in prices. Another index used to measure prices is the deflator for the Personal Consumption Expenditures (PCE) component of Gross National Product. Although less publicized, the PCE deflator is widely recognized by economists as a better measure of price changes than the CPI because it allows for substitution among broad categories of purchases, and therefore lessens the problem of overstatement.

[2] There will be no further discussion comparing rates of change in prices and personal income, mainly because no adequate price index exists for use with personal income and its components. Despite this fact, the reader should be aware that much of change in personal income in the 1970s can be attributed to increasing prices.

(Continued from page 1)

from year to year. In fact, labor and proprietors' income actually fell in 1974.

The other two components of personal income—dividends, interest, and rent, and transfer payments—increased steadily and consistently, outpacing the growth of personal income. Dividends, interest, and rent grew 181 percent between 1969 and 1979, but transfer payments was by far the fastest growing component, with a growth rate of 238 percent.

It is not surprising to note that the relative importance of the three components varied throughout the period 1969-79, with a definite gainer and loser (Table 2). The average percent of personal income accounted by each component was: labor and proprietors' income, 71.9 percent; dividends, interest, and rent, 17.4 percent; and transfer payments, 10.7 percent.

Labor and proprietors' income was a loser in terms of relative importance. It began, in 1969, by comprising 74.4 percent of personal income, but in 1979 it accounted for 70.9 percent. Although 1969 may have been an unusual year, it is still apparent that the relative importance of labor and proprietors' income fell during the 1970s.

Dividends, interest, and rent, and transfer payments gained in the percentages of personal income that they accounted for. Dividends, interest, and rent moved from 16.8 percent to 17.8 percent, and transfer payments went from 8.8 percent to 11.3 percent.

Also contained in Table 2 are estimates of per capita personal income for Nebraska. Since the size of total personal income is influenced by population size, per capita personal is a better measure of economic welfare of the state and allows for direct comparisons with the nation and among states and counties.

Based upon the first three quarters of 1979, it is estimated that per capita income will be $8,593 in 1979. This represents a 148 percent increase over the $3,468 recorded in 1969. Throughout the decade of the 1970s, Nebraska's per capita income generally fell somewhat below national per capita income; Nebraska's value averaged about 97 percent of the nation's value, and equaled or surpassed national per capita income on only two occasions—1973 and 1975.

SOURCES OF PERSONAL EARNINGS

This section briefly examines the structure of the state's income situation by focusing on the sources of earnings during the period 1969-1978. The ending year was chosen to be 1978

Table 3
PERSONAL EARNINGS BY TYPE AND INDUSTRY
1969 AND 1978

	Earnings (millions of $)		Percent of Total Earnings		Percent Increase in Earnings
	1969	1978	1969	1978	1969 - 1978
Total Personal Earnings	4,052	8,991	---	---	122
BY TYPE					
Wage and Salary Disbursements	2,941	6,769	72.6	75.3	130
Other Labor Income	152	607	3.8	6.8	299
Farm Proprietors' Income	503	893	12.4	9.9	78
Nonfarm Proprietors' Income	455	721	11.2	8.0	58
BY INDUSTRY					
Agricultural Services and Other	18	31	0.4	0.3	72
Farm	567	1,062	14.0	11.8	87
Mining	13	34	0.3	0.4	162
Construction	280	633	6.9	7.0	126
Manufacturing	661	1,404	16.3	15.6	112
Transportation and Public Utilities	332	853	8.2	9.5	157
Wholesale Trade	238	692	5.9	7.7	191
Retail Trade	503	917	12.4	10.2	82
Finance, Insurance, and Real Estate	231	585	5.7	6.5	153
Services	542	1,279	13.4	14.2	136
Government	667	1,501	16.5	16.7	125

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table 2
NEBRASKA PERSONAL INCOME, 1969-1979

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979*	Average Percent of PI 1969 - 1979
						(in millions of current dollars)						
Personal Income (PI)	5,112	5,442	5,864	6,638	7,834	8,009	9,087	9,396	10,374	11,868	13,526	---
Net Labor and Proprietors' Income by Place of Residence	3,804	3,984	4,255	4,838	5,777	5,658	6,485	6,582	7,224	8,386	9,590	---
Dividends, Interest, and Rent	857	935	1,017	1,148	1,294	1,472	1,529	1,667	1,911	2,124	2,412	---
Transfer Payments	451	522	592	651	763	879	1,072	1,147	1,239	1,359	1,525	---
						(percent of PI)						
Net Labor and Proprietors' Income by Place of Residence	74.4	73.2	72.6	72.9	73.7	70.6	71.4	70.1	69.6	70.7	70.9	71.9
Dividends, Interest, and Rent	16.8	17.2	17.3	17.3	16.5	18.4	16.8	17.7	18.4	17.9	17.8	17.4
Transfer Payments	8.8	9.6	10.1	9.8	9.7	11.0	11.8	12.2	11.9	11.5	11.3	10.7
						(in dollars)						
Per Capita Income	3,468	3,657	3,904	4,364	5,113	5,198	5,887	6,054	6,672	7,582	8,593	---

*Annual estimate based on data through first three quarters.
Source: U.S. Department of Commerce, Bureau of Economic Analysis.

PERSONAL INCOME IN NEBRASKA COUNTIES

Personal incomes vary considerably in size and composition in Nebraska counties. Because of this, comparison of the relative levels of economic well-being at the county level can best be achieved by analyzing the levels of per capita personal income and rates of change in personal income. The Bureau of Economic Analysis of the U.S. Department of Commerce prepares annual estimates of total and per capita personal income at the county level, with 1977 being the latest year for which data are available.[1]

PER CAPITA INCOME

In 1977, per capita income for the state averaged $6,672, compared to the national average of $7,026. Nebraska counties exhibited a wide range of per capita incomes, with counties ranking among the highest and lowest in the nation in terms of per capita income. Three southwest Nebraska counties, Deuel, Kimball, and Perkins, led the state in per capita incomes, while Loup County was reported to have the lowest per capita income in 1977.

Because many counties in Nebraska have important agriculture sectors, it should be noted that farm income is the most volatile and difficult-to-measure component of personal income. Therefore, this section must be viewed with caution since no single year can adequately describe a county's income situation.

One of the major differences in per capita income occurred between nonmetropolitan and metropolitan counties. Despite the fact that both groups produced approximately the same level of personal income, nonmetropolitan counties had an average per capita income of $6,314, while the average for metropolitan counties was $7,133.

Figure 1 (p. 6) illustrates the dispersion of per capita incomes among Nebraska counties. As can be seen in this map, there are four major clusters of high-income counties. The largest is composed of the thirteen counties in the south-central and southeastern portions of the state. These counties are all south of the Platte River and extend from Kearney County to the Missouri River. Although a large portion of the personal income in this area originates in the agricultural sector, the economies are fairly diversified with substantial trade and manufacturing incomes. Lincoln, Hastings, and Beatrice are the largest cities in this region.

Two other clusters, containing a total of ten counties, are located in southwestern Nebraska—one group borders Wyoming and Colorado and the other borders Colorado and Kansas. Nearly all the counties in these areas have a heavy dependence on agriculture, but also have proportionally more mining income than the state as a whole.

The fourth group of high-income counties lies in the eastern part of the state, north of the Platte River. This four-county area is composed of some of the most populous counties in the state. Although this region has a very diverse economy, it contains the largest concentration of manufacturing in the state. The major cities in this area are Omaha, Fremont, Norfolk, and Columbus.

The state's low-income counties are clustered in a twenty-county area located in north-central and northeastern Nebraska, extending northeast from Arthur County to the Missouri River. This is the least-populated area of the state and has an almost exclusive dependence on agriculture, with livestock-related agriculture of primary importance.

(Continued on page 6)

---

[1] Estimates for 1978 should be released later this month and presented in the April issue of the *Survey of Current Business*, published by the U.S. Department of Commerce. It will be interesting to note if the patterns presented in this article change significantly in 1978.

(NEBRASKA PERSONAL INCOME, continued)

because data for 1979 are not available as of this writing. Since relative values and not absolute values will be of primary importance in this section, one year's difference should not appreciably affect the comparison. As used here, personal earnings includes wage and salary income, other labor income, and proprietors' income. It differs from net labor and proprietors' income by residence since it does not exclude personal contributions for social insurance nor is it adjusted for residence. It is also called "total labor and proprietors' income by place of work."

Table 3 (p. 2) lists the sources of personal earnings by type and industry. The data reveal that there were some changes in the structure of earnings, especially in the type of earnings. Caution must be exercised, however, when interpreting these changes. It must be remembered that these data pertain to the state as a whole. Individual counties or areas within the state are likely to exhibit considerably different patterns.

Between 1969 and 1978, personal earnings grew at a rate of 122 percent. This growth was not shared by all types of income as farm and nonfarm proprietors' incomes increased by 78 percent and 58 percent, respectively, while other labor income increased nearly 300 percent. As a result of these changes, the percentage of earnings originating from proprietors dwindled from 23.6 percent to 17.9 percent. Other labor income, in contrast, increased its share from 3.8 percent to 6.8 percent and is closing the gap between it and nonfarm proprietors' income.

The shifts in industrial sources of personal earnings were not as sizable as the shifts in types of earnings, but there are some noticeable changes. The most surprising is in the trade sectors. Growth in retail trade was only 82 percent, as its percentage share dropped from 12.4 percent to 10.2 percent. Wholesaling, on the other hand, increased 191 percent while increasing its share from 5.9 percent to 7.7 percent.

Not so surprising was the continued decline in the farm sector as a source of earnings. As a result of its 87 percent growth rate, its share fell from 14.0 percent in 1969 to 11.8 percent in 1978. Much has been written about the volatility in this sector, so comparisons between any two time periods should be viewed with caution.

It must be remembered that all dollar amounts presented here are current dollars. Any changes, therefore, also include changes in prices. Furthermore, because agriculture is an important source of earnings in Nebraska, comparisons between any two time periods can be misleading. Agricultural income can fluctuate significantly from one year to the next, which will affect not only levels of income and earnings but also the relative importance of the other sectors.

J. A. D.

Review and Outlook

Nebraska's overall economic condition was mixed in December, with two of five sectors increasing during the month. The physical volume index for the state fell 1.8 percent from its November level and was 4.7 below its value of last year. Nationally, the index was down 0.1 percent during the month and was 0.9 percent below the level of last December.

The November-to-December decrease in state economic activity was concentrated in the agricultural sector, where activity fell 13.1 percent. In contrast, nonagricultural output rose 0.2 percent, with the two major nonagricultural sectors registering gains. The month-to-month percentage changes in the nonagricultural sectors were: distributive, +0.6 percent; manufacturing, +0.2 percent; government, -0.2 percent; and construction, -3.5 percent.

Year-to-date data indicate that in 1979 the Nebraska economy experienced its second consecutive year of sluggish growth. The growth occurred in two spurts—a three-month spurt beginning in March and a two-month spurt beginning in September. For the year, the index was only 0.9 percent above the level of 1978 (see Table 1). This compares to a 1.5 percent rise in the U.S. physical volume index for 1979, and a 1.1 percent growth in Nebraska economic activity in 1978.

The increase in the Nebraska economy in 1979 was shared by three of the five sectors. For the year, agricultural activity was up 2.9 percent and nonagricultural activity was up 0.6 percent. The changes in the yearly output for the (Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

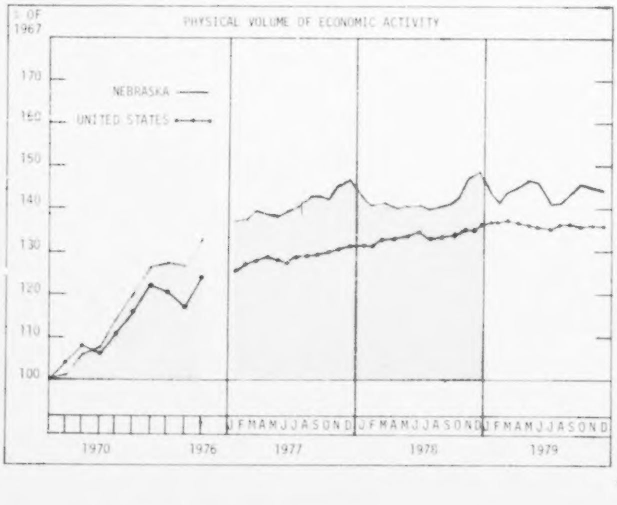
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

December 1979	Current Month as Percent of Same Month Previous Year		1979 Year to Date as Percent of 1978 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	106.5	111.3	113.1	112.8
Agricultural	91.8	107.7	123.1	120.4
Nonagricultural	109.5	111.4	111.6	112.5
Construction	89.9	107.3	97.7	111.0
Manufacturing	117.7	115.0	117.9	116.4
Distributive	109.6	110.9	111.6	111.8
Government	103.3	106.6	107.0	107.4
Physical Volume	95.3	99.1	100.9	101.5
Agricultural	81.3	100.6	102.9	104.9
Nonagricultural	97.9	99.1	100.6	101.4
Construction	81.2	97.0	86.3	98.0
Manufacturing	103.8	100.7	105.6	104.0
Distributive	96.7	97.9	100.4	100.5
Government	99.6	101.6	99.3	100.9

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	336.3	315.4
Agricultural	330.8	295.4
Nonagricultural	337.2	316.1
Construction	290.6	298.7
Manufacturing	399.8	313.3
Distributive	328.8	325.8
Government	301.7	289.2
Physical Volume	142.4	135.9
Agricultural	130.7	121.6
Nonagricultural	144.4	136.4
Construction	104.2	107.1
Manufacturing	163.9	129.3
Distributive	143.0	141.7
Government	137.9	142.2



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

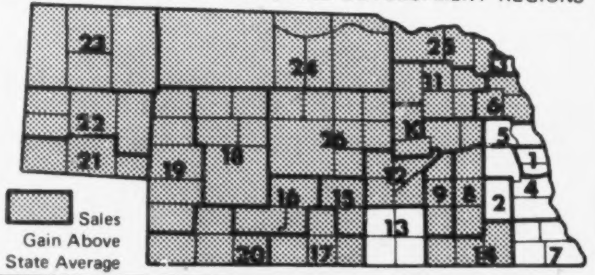
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	Dec. 1979 as percent of Dec. 1978	Dec. 1979 as percent of Dec. 1978	Year to date'79 as percent of Year to date'78
The State	101.3	100.4	100.5
1 Omaha	111.1	109.0	97.7
Bellevue	98.5		
2 Lincoln	98.1	97.4	100.2
3 So. Sioux City	88.5	86.2	92.3
4 Nebraska City	92.7	94.7	99.8
5 Fremont	95.6	94.2	100.4
Blair	99.7		
6 West Point	98.0	88.2	103.4
7 Falls City	97.7	96.3	99.1
8 Seward	105.2	98.2	102.2
9 York	95.1	89.1	103.9
10 Columbus	93.9	95.2	103.6
11 Norfolk	98.1	97.6	103.2
Wayne	100.8		
12 Grand Island	96.0	94.0	102.7
13 Hastings	92.5	91.5	99.6
14 Beatrice	93.3	90.6	101.0
Fairbury	89.5		
15 Kearney	98.3	96.0	102.9
16 Lexington	95.0	96.0	104.6
17 Holdrege	103.7	94.5	101.0
18 North Platte	97.7	97.9	102.2
19 Ogallala	96.2	95.1	104.2
20 McCook	100.8	99.8	103.9
21 Sidney	94.2	103.0	103.2
Kimball	125.2		
22 Scottsbluff/Gering	99.6	98.7	102.5
23 Alliance	109.9	97.8	103.1
Chadron	91.5		
24 O'Neill	100.9	105.9	108.4
25 Hartington	98.9	89.8	102.6
26 Broken Bow	96.3	96.7	106.9

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1979 YEAR TO DATE AS PERCENT OF 1978 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

nonagricultural sectors were: manufacturing, +5.6 percent; distributive, +0.4 percent; government, −0.7 percent; and construction, −13.7 percent. With the exception of manufacturing, the rates of change in the sectors of the Nebraska economy were all less than those of the U.S. economy.

The rise in agriculture output was accompanied by increasing prices. In 1979, prices received by Nebraska farmers increased 19.9 percent, contributing to an increase in the dollar volume of cash farm marketings of more than $800 million. During this time period, prices paid increased 13.6 percent, but they were increasing more rapidly at the end of the year while prices received were increasing less rapidly.

The strongest sector in the Nebraska economy continued to be manufacturing. Its growth was inconsistent, however, as output in this sector rose in only six months during 1979. Moreover, the highest value of the index occurred in July. Employment in this sector also increased during the year, recording a 3.8 percent gain over 1978.

The distributive sector was the other major sector recording an increase in output. Growth in this sector was very erratic in 1979, with more monthly declines than increases. Its index peaked in May with a value of 149.3. For the year, employment was 2.6 percent above last year.

The government sector was sluggish throughout 1979 and finished the year below 1978. Employment in the government sector fell 0.7 percent.

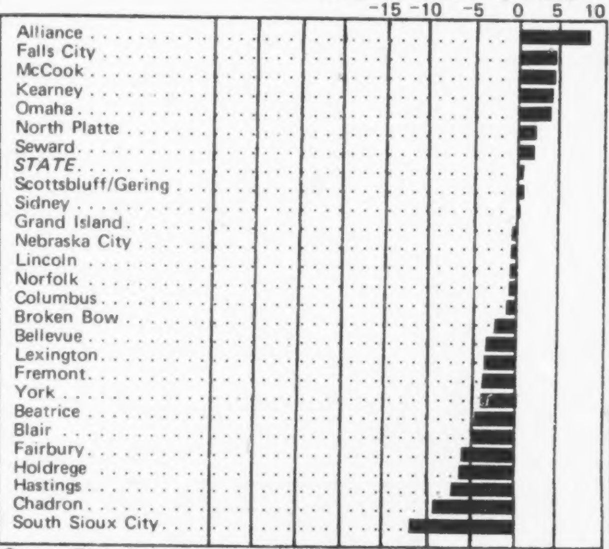
The sizable drop in construction activity continued the trend which began in 1978. Residential building, nonresidential building, and non-building construction were all affected, but the drop in residential construction was most severe, especially in the last half of 1979.

After adjustment for price changes, Nebraska's net taxable sales in December were 0.4 percent above last December. Nationally, retail sales were down 4.1 percent from last year's level. On a year-to-date basis for 1979, sales in Nebraska increased 0.5 percent while sales for the nation decreased 0.6 percent. Increases in annual sales occurred throughout Nebraska as twenty-one of the state's twenty-six planning regions had total sales in 1979 above those of 1978.

December's softness in the state economy was reflected in the city business indexes. Even though the city business indexes rose an average of 0.3 percent, seventeen of the twenty-six cities registered losses relative to December 1978. Alliance recorded the largest gain in activity, with an increase of 8.0 percent. Other cities with December-to-December increases exceeding 3 percent were Falls City, McCook, Kearney, and Omaha.

J. A. D.

CITY BUSINESS INDEXES
Percent Change Dec. 1978 to Dec. 1979



Source: Table 3 (page 4) and Table 4 below.

4. DECEMBER CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.9	88.2	95.5
Alliance	112.7	74.1	102.8
Beatrice	99.4	73.9	93.3
Bellevue	99.4	65.1	92.1*
Blair	95.5	48.7	100.6
Broken Bow	97.3	96.2	102.0
Chadron	98.1	42.8	84.7
Columbus	100.2	159.5	93.0
Fairbury	98.8	80.4	98.4
Falls City	100.7	365.1	91.6
Fremont	97.4	92.6	93.5*
Grand Island	105.9	68.3	105.4
Hastings	102.5	48.8	82.0
Holdrege	100.1	41.1	64.4
Kearney	114.6	96.3	89.0
Lexington	101.7	78.9	87.4
Lincoln	100.9	67.0	115.9
McCook	100.8	241.6	95.9
Nebraska City	102.2	164.9	94.6
Norfolk	101.7	88.8	98.6
North Platte	108.6	99.2	91.9
Omaha	99.4	93.5	95.2
Scottsbluff/Gering	102.0	113.8	90.8
Seward	99.6	133.6	83.9
Sidney	107.2	182.3	69.8
So. Sioux City	92.9	51.9	82.9
York	100.9	75.3	87.6

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

December 1979	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	229.9	113.3	111.3
Commodity component	219.4	113.0	111.4
Wholesale Prices	249.4	114.7	112.4
Agricultural Prices			
United States	243.0	107.0	114.6
Nebraska	253.0	112.9	119.9

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(Continued from page 3)

PERCENT CHANGE IN PERSONAL INCOME

Between 1969 and 1977, the state recorded a growth in personal income of 104 percent. This compares to 106 percent growth rate for the nation as a whole. As was the case for per capita income, Figure 2 shows that this growth was not spread uniformly throughout the state, with some counties growing much more rapidly than others. In contrast to per capita income, however, metropolitan and nonmetropolitan counties exhibited very similar rates of growth. Personal income in metropolitan counties grew at a rate of 106 percent, while personal income in nonmetropolitan counties grew 102 percent.

Comparing Figure 1 with Figure 2, it is apparent that many of the counties with high per capita incomes were also among the fastest growing counties in terms of personal income, and many of the low-income counties were among the slowest growing. There were, however, some major exceptions, as Nemaha and Richardson counties experienced high incomes but low rates of growth. On the other hand, Holt County recorded a low per capita income but had a high rate of growth.

The counties with high growth rates fall into two major clusters. The largest is composed of sixteen contiguous counties which lie in the western and southwestern portions of the state. As stated earlier, agriculture and mining are relatively more important when compared to the state. With the inclusion of a few more counties, however, the economic base of this region is widened. The major trading centers in this region are North Platte and Scottsbluff.

The other concentration of strength is located in southeastern Nebraska. This area conforms quite closely with the high-income region. The primary difference is the inclusion of Buffalo and Sarpy counties and the exclusion of a few of the lesser-populated counties.

The remaining rapidly growing counties are scattered in the northeast, and consist of Dakota, Madison, and Platte counties.

The state's slow-growing counties were concentrated in groups of counties extending across the northern two-thirds of the state, with the remainder scattered throughout southern Nebraska. Although widely dispersed, this group of counties shares two common characteristics: a heavy dependence on agriculture and few, if any, trading centers (cities with populations of more than 2,500). Furthermore, Falls City is the only city in these thirty-two counties with more than 5,000 inhabitants.

Because agriculture is a primary source of income in many Nebraska counties, in times of relatively high agricultural prices and large output it is possible for many of the currently low-ranking counties to become high-ranking counties, and vice versa. This also means that if the agricultural picture worsens, so does their relative income situation and economic well-being.

J. A. D.

Figure 1

PER CAPITA PERSONAL INCOME, 1977

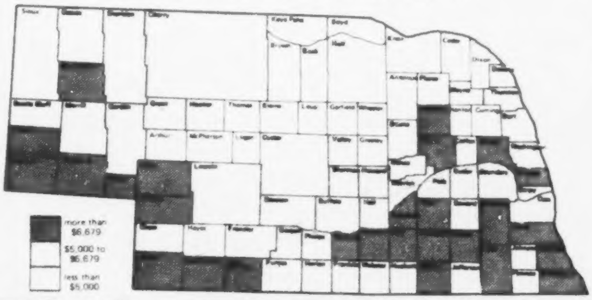
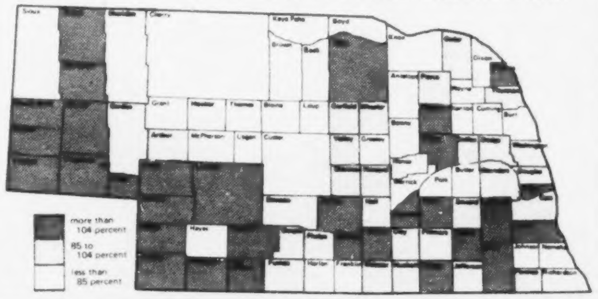


Figure 2

GROWTH IN PERSONAL INCOME BETWEEN 1969 AND 1977



UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 427 April 1980

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska-Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

CONGRESSIONAL INFO SERVIC270188
7101 WISCONSIN AVENUE BR
WASHINGTON, DC 20014

BEST COPY AVAILABLE

UNL News

Vol. 59 No. 33 May 1980 (ISSN 0149-4163)

Business in Nebraska BB

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

U 7860-1 U A recd 5/21/80

REGULATION Q: THE CRIME OF '66*

This presentation sounds a single theme, but a theme which has many variations: that the congressionally mandated system of deposit-rate ceilings at commercial banks, mutual savings banks, and S&Ls is a monstrous economic and political crime wave, monstrous because its principal victims are the nation's least fortunate citizens. The root crime was committed in 1966 when, as a "temporary" emergency measure to forestall a few S&L bankruptcies, Congress extended Regulation Q ceilings to thrift institutions. Although this system of comprehensive ceilings on deposit interest rates has been administered in ways that discriminate grossly against small savers, Congress has renewed it routinely. It is currently on the books through 1980.

This "Crime of '66" and its aftermath should disturb even the imperturbable conscience of a cultivated modern congressperson. The structure of these ceilings mocks our constitution's fundamental commitment to equal opportunity. It cynically permits vastly higher interest rates to be paid on sizable accumulations of funds.

Regulation Q ceilings tax the poor to finance "welfare" for the rest of us, equivalent in their distributional effects to a confiscatory federal tax that falls on the financial wealth of *small* savers only and whose proceeds are designated to subsidize homebuilders, homeowners, and inefficient depository institutions.

DIFFERENTIAL OPPORTUNITIES FOR REGULATORY ESCAPE IN FINANCIAL MARKETS

Regulation Q ceilings victimize small savers disproportionately for several reasons. First, small savers are frozen out of securities markets by the structure of transactions costs. One of the main functions depository institutions perform is to intermediate securities denominations by pooling small individual deposits into amounts large enough to trade in fully diversified round lots of high-denomination instruments. The smaller the amount of funds a household controls, the fewer the alternative assets into which it can economically put its savings. Whether ceilings exist or not, small savers tend to hold a large proportion of their accumulated savings in "regulated financial assets," a term I use to designate assets (deposits and U.S. savings bonds) whose yields are held down administratively as a result of deposit-rate ceilings.

However, sophisticated households with sizable amounts of savings can shop among a variety of assets. They can and do rearrange their financial-asset portfolios to lessen the burden that deposit-interest ceilings would otherwise place on them. Moreover, the longer the ceilings have remained in force, the more fully have financial markets and institutions been able to adapt to help them. The rapid growth of money-market mutual funds and credit unions--and the development of small denomination bonds by large issuers such as Sears—provide examples of this adaptation. Although such regulation-induced innovations reduce the burden of deposit-interest ceilings on large savers, they institutionalize imperfectly diversified patterns of intermediation that are economically less efficient than the ones they replace. This is a cost borne by society as a whole.

For small savers, possibilities for adapting their *financial* portfolios are severely limited and have been further compressed by government action to reduce disintermediation, notably the 1970 increase in the minimum denomination of U.S. Treasury bills. Small savers lessen the burden of low ceiling rates of interest on regulated financial assets principally by reducing their saving. But cutting back their savings plans prevents them from improving their station in life and spreads the burden that this regulation places on their standard of living far into the future. These households will continue to bear the costs of the Regulation Q era long after it has faded into history.

Ceilings on thrift-institution deposit interest were not intended to shaft small savers and promote inefficient financial arrangements. They were adopted to protect the solvency of the nation's weakest S&Ls and savings banks against the effects of rapidly increasing market interest rates and to promote housing activity by assuring a continued flow of mortgage funds. But every regulation must be judged by its unintended effects as well as its intended ones.

REAL ESTATE AS AN OPPORTUNITY FOR ESCAPE

During the Regulation Q era, for most households the inflation-adjusted after-tax rate of return has been negative on the few *financial* assets their wealth permits them to buy. Even in the 20 percent tax bracket, a 5.25 percent return on passbook savings yields only 4.20 percent after taxes. In the 30 percent bracket, the after-tax yield falls to 3.68 percent. It is hard to remember when the rate of inflation in product prices did not exceed these low rates of return. This means that savings invested in these assets have less real value with each passing year.

In the absence of government-enforced (Continued on page 2)

---

*This article [reprinted with permission from *Illinois Business Review* 36, No. 7 (August 1979)] is taken from testimony given on 20 March 1979 before the Subcommittee on Commerce, Consumer, and Monetary Affairs. Hearings by this subcommittee of the Committee on Government Operations of the U.S. House of Representatives have been part of an overall review of congressionally mandated deposit-rate ceilings at commercial banks, savings and loan associations, and other thrift institutions.

(Continued from page 1)

ceilings on deposit interest rates, market forces would have pushed financial-institution deposit rates up at least enough to promise low-bracket depositors a small anticipated net yield. Given the Q ceilings are in place and that transactions costs keep small savers out of bond and stock markets, many households have found that real estate assets offer their accumulated savings the best protection against erosion in purchasing power. Real estate has been traditionally attractive to Americans and returns on real property have been taxed much more favorably than returns on financial assets. Federal tax treatment of a property's capital income is especially generous for owner-occupants. Real estate gained attractiveness under comprehensive deposit-rate ceilings because well-developed mortgage markets provided a convenient vehicle for small savers to leverage their modest savings enough to cover the purchase price of a residence or rental property.

Survey data depicting the composition of household assets indicate that in the face of unremitting inflation, deposit-rate ceilings have markedly changed the age distribution of real-estate ownership. This is shown in the table. Even as early as 1970 (unfortunately, this is the latest year for which representative household balance sheet data have been collected), households whose heads were less than 55 years in age had sharply increased the proportion of their accumulated savings held in real estate, while older households had shifted their funds out of both real estate and regulated financial assets into "unregulated financial assets" (stocks, marketable bonds, and mutual funds).

Although this point is not yet widely appreciated, small savers' efforts to protect their savings against the effects of unfair deposit-rate ceilings provide the motive force for the current speculative boom in housing. These ceilings have greatly contributed to secular inflation in housing costs and, by discouraging the flow of saving into strictly financial instruments, have also reduced the pool of savings available for new business investment. Even though Regulation Q is intended to help housing, authorities by no means meant to push it so assiduously and at such a high cost in macroeconomic destabilization.

PERCENTAGE BREAKDOWN OF HOUSEHOLDS' PORTFOLIOS AND OF FINANCIAL ASSETS AND REAL-ESTATE EQUITY BY AGE CLASS IN 1962 AND 1970

Age of Household Head (in years)	Financial Assets			Real-Estate Equity		
	Regulated	Unregulated	Total[a]	Total	Equity in Home	Equity in Investment Real Estate
1962 data set						
Under 25	19.5	57.4	76.9	23.2	8.8	14.4
25 to 34	18.9	12.2	31.1	68.9	48.1	20.8
35 to 44	13.0	20.2	33.2	66.8	50.2	16.6
45 to 54	14.6	20.0	34.6	65.4	51.0	14.4
55 to 64	17.6	17.7	35.3	64.7	47.1	17.6
65 and over	27.0	12.8	39.8	60.2	42.0	18.2
2,117 Respondents	18.1	17.9	36.0	64.0	47.1	16.9
1970 data set						
Under 25	44.8	8.7	53.5	46.5	36.1	10.4
25 to 34	19.9	8.1	28.0	72.1	53.2	18.9
35 to 44	14.8	12.0	26.8	73.2	49.2	24.0
45 to 54	15.9	9.5	25.4	74.6	55.6	19.0
55 to 64	17.0	27.0	44.0	56.1	37.6	18.5
65 and over	21.3	25.8	47.1	53.0	32.7	20.3
2,576 Respondents	18.0	19.4	37.4	62.6	42.5	20.0

[a] The sum of the two totals shown may not add to 100.0 because of rounding.

Source: Calculated from *Survey of Consumer Finances* data tapes. (For a description of these surveys, see George Katona, L. Handell, and J. Schmiedeskamp, *1970 Survey of Consumer Finances* [Ann Arbor: Survey Research Center, Institute of Social Research, 1971].)

COSTS AND VICTIMS OF DEPOSIT-RATE REGULATION

Costs imposed on households by deposit-rate regulation fall into two categories: (1) forgone interest on regulated assets actually held; and (2) distortions in the level of household saving and in its allocation among competing assets.

The value of deposit interest forgone by households has been assessed for scattered years or regions by several economists, but the most comprehensive figures are those of David H. Pyle ["Interest Rate Ceilings and Net Worth Losses by Savers" in Kenneth Boulding and Thomas Wilson, eds., *Redistribution Through the Financial System* (New York: Praeger, 1978), pp. 87-101]. Pyle estimates that between 1968 and 1975 holders of savings accounts lost at least $22 billion. Although open-market interest rates did not greatly exceed ceiling rates on passbook savings in 1976 and the first half of 1977, since then the ceilings have misappropriated many more billions of dollars of household interest.

Even neglecting the forgone interest that accrued during 1976 and the first half of 1977, one can easily support an estimate of $20 billion in lost interest for the three years and three months that have passed since Pyle's period of estimation. In September 1978, roughly $425 billion were held in passbook savings accounts at commercial banks, savings banks, and S&Ls, with about another $610 billion in certificate accounts at these institutions. Using these totals as a base and assuming that, over the last 18 months, forgone interest averaged two percentage points on passbook accounts and one percentage point on certificates provides a relatively simple way to justify my $20 billion figure. One could conservatively add another $1 billion a year in interest that would have been paid on U.S. savings bonds if the Treasury had not feared upsetting the Regulation Q applecart. Pulling these figures together produces a grand estimate of about $55 billion dollars in forgone interest. Because senior citizens (those over 65 years of age) hold a vastly disproportionate amount of total funds in savings accounts (35 percent of regulated assets in the 1970 survey), about $19 billion of these dollars were diverted from the old.

The second category of costs is much harder to evaluate. These must be viewed as "people costs" rather than mere dollar magnitudes. Households have been able to rearrange their portfolios to push their overall portfolio rate of return well above the 5-to-6 percent level available on regulated assets. Except for relatively high-income and older families, they have accomplished this principally by stepping up investments in real estate to counterbalance the low yields available to them on financial assets.

The big losers in the Regulation Q game are family units who do not own any real estate assets at all. Compared with other families, these households are drawn disproportionately from the ranks of the black, the female, the poor, and the young. In competing for mortgages, these groups are customarily disadvantaged. However, deposit-interest ceilings severely aggravate that disadvantage by driving up both the cost of housing and demands for mortgages among other groups, while reducing the disadvantaged sectors' ability to accumulate the wherewithal to make an acceptable down payment.

(Continued on page 6)

GOAL PROGRAMMING: A NEW MANAGEMENT TOOL

In today's complex organizational environment, the decision maker is regarded as one who attempts to achieve a set of objectives to the fullest possible extent in an environment of conflicting interests, incomplete information, and limited resources. The soundness of decision making is measured by the degree of organizational objectives achieved by the decision. Therefore, recognition of organizational objectives provides the foundation for decision making.

Decisions are also constrained by environmental factors such as government regulations, welfare of the public, and long-run effects of the decision on environmental conditions (pollution, quality of life, use of nonrenewable resources, and the like). To determine the best course of action, therefore, a comprehensive analysis of multiple and often conflicting organizational objectives and environmental factors must be undertaken. Indeed, the most difficult problem in decision analysis is the treatment of multiple conflicting objectives.

The issue becomes one of value trade-offs in the complex socioeconomic structure of conflicting interests. Regardless of the type of problem on hand, it is extremely difficult to answer questions such as: What should be done now? What can be deferred? What alternatives are to be explored? What should be the priority structure for the objectives?

Important developments in the field of management have indicated that "management by multiple objectives" is the most difficult and important area of management science. In my opinion, the most important research topic in the field of management science today is the area of multi-criteria decision analysis. Organizations and society have become so fragmented into interest and value groups that there is no longer one predominant objective for any organization. Consequently, one of the most important and difficult aspects of any decision problem is to achieve an equilibrium among the multiple and conflicting interests and objectives of the various components of the organization.

Several recent studies concerning the future of the industrialized society have echoed this same theme. When the society is based on enormous technological development and change, stability of the system must be obtained by achieving a delicate balance among such multiple objectives as food production, industrial output, pollution control, population growth, use of natural resources, international cooperation for economic stability, and civil rights and equal opportunity provisions.

Suppose a city is to formulate a long-range economic plan that is to evaluate long-range objectives and their resource requirements. The city needs new water tanks; extended transit systems; new streets; extended water, garbage, and sewage services; new welfare programs; job-training programs; and so on. The resources required usually surpass resources available. There exists competition for resources among projects. If substantial resources are to be invested in water and sewage services, other projects must be reduced in scale, deferred, or abandoned completely. Therefore, the assignment of priorities to the competitive projects becomes the first decision problem. Next, the sources of funds should be analyzed. Should the city increase property tax, sales tax, city income tax, business tax, service fees, or use a special bond to acquire resources for necessary projects? There are conflicting interests, and the decision maker must assign certain priorities.

A formal management process by multiple objectives through the use of priorities is a new frontier of management science. The goal programming approach appears to be an appropriate, powerful, and flexible technique of decision analysis for the troubled modern decision maker who is burdened with achieving multiple conflicting objectives under complex environmental constraints. Goal programming allows a simultaneous solution to a system of complex multiple objectives. Goal programming is capable of handling decision problems that deal with a single goal, with multiple goals, and multiple subgoals.

In evaluating multiple goal outcomes, a manager is often faced with the fact that some outcomes are relevant to organizational objectives but cannot easily be analyzed in terms of cost, profit, or utility. Conventional linear programming has the inherent difficulty that its unidimensional objective criterion requires cost, profit, or utility information that is often practically impossible to obtain. For example, in a production scheduling problem, costs associated with change in employment level are not easy to determine if costs of hiring, laying off, low employee morale, change in the public image of the firm, and so forth, are to be considered.

Goal programming is a modification and extension of linear programming. The goal programming approach allows the simultaneous solution of a system of complex objectives rather than a single objective. In addition, the objective function of a goal programming model may be comprised of nonhomogenous units of measure, that is, pounds and dollars, rather than one type of unit. The only requirement in goal programming is that there be a hierarchy of importance among these conflicting goals so that the low-order goals are considered only after the higher-order goals are satisfied or have reached the point beyond which no further improvements are desired. In other words, if management can provide an ordinal measure of goals in terms of their contributions of their importance to the organization, the program can be solved by goal programming.

In goal programming, instead of trying to maximize or minimize the objective criterion directly through structural variables, the deviations between goals and what can be achieved within the given set of constraints are to be minimized. Unlike linear programming, the goal programming objective function contains deviational variables to represent each goal or subgoal. The objective function then becomes the minimization of these deviations based on the relative importance or priority assigned to them. The objective function, in effect, tends to cause the deviational variables to "drive" the values of the decision variables.

Applications of goal programming to real-world decision problems are just beginning to be explored. Example applications include: advertising media planning, manpower planning, production planning, academic planning, financial analysis, economic policy analysis, transportation logistics, marketing strategy planning, environmental protection, and health care planning.

Information concerning educational programs which will gain familiarity and practice for the decision maker in utilizing the concepts and methods of goal programming can be obtained from the writer or from the Bureau of Business Research.

SANG M. LEE*

---

*Chairman, Department of Management, University of Nebraska-Lincoln.

Review and Outlook

The level of economic activity in Nebraska rose slightly in January 1980, although three of the five sectors recorded losses when compared to December 1979. The physical volume index for the state increased 0.4 percent from its December level, but was 0.4 percent below its value of January 1979. Nationally, a similar pattern was exhibited as the index rose 0.4 percent from December, and was 0.7 percent below its value of last year.

The December-to-January increase in state economic activity was concentrated in the agricultural sector, where activity rose 9.5 percent. In contrast, nonagricultural output fell 0.6 percent, with three of the four sectors declining. The month-to-month percentage changes for the nonagricultural sectors were: distributive, unchanged; manufacturing, -0.3 percent; government, -1.2 percent; and construction, -3.9 percent.

These December-to-January changes are based upon revised data which produced significant changes in some of the sectoral indexes for many of the months in 1978 and 1979. These changes primarily were due to annual revisions in the data series which are used to construct the indexes, especially the employment and cash farm marketings data series. The indexes in Table 2 reflect these changes and, as a result, are not directly comparable to data published in previous issues of *Business in Nebraska*.

In addition to data revisions, the factors used to adjust some of the data for seasonal variations were updated after all the revised data for 1979 had been

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade, transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

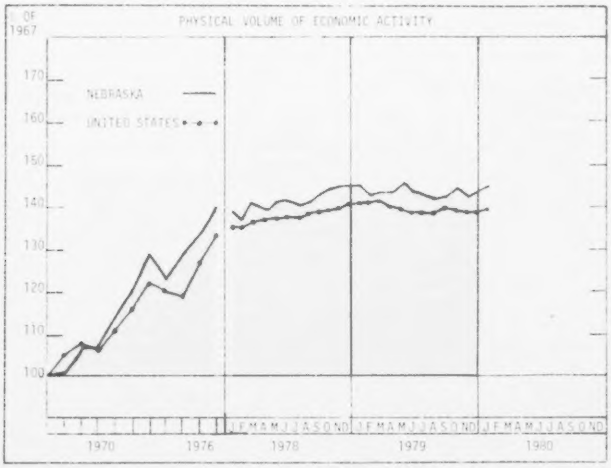
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

January 1980	Current Month as Percent of Same Month Previous Year		1980 Year to Date as Percent of 1979 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	110.8	111.8	110.8	111.8
icultural	106.6	105.6	106.6	105.6
nagricultural	111.4	112.0	111.4	112.0
onstruction	88.0	115.9	88.0	115.9
anufacturing	118.3	115.1	118.3	115.1
Distributive	113.3	111.5	113.3	111.5
Government	102.7	106.7	102.7	106.7
Physical Volume	99.6	99.3	99.6	99.3
Agricultural	101.1	103.8	101.1	103.8
Nonagricultural	99.4	99.1	99.4	99.1
Construction	80.1	105.5	80.1	105.5
Manufacturing	103.9	99.7	103.9	99.7
Distributive	99.4	97.9	99.4	97.9
Government	98.3	101.5	98.3	101.5

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	331.1	313.3
Agricultural	304.3	317.7
Nonagricultural	335.0	313.2
Construction	267.5	327.7
Manufacturing	351.7	282.7
Distributive	347.3	332.6
Government	300.2	297.4
Physical Volume	144.5	139.6
Agricultural	121.7	132.9
Nonagricultural	147.9	139.8
Construction	95.9	117.5
Manufacturing	171.0	135.8
Distributive	148.9	142.6
Government	138.5	146.2



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

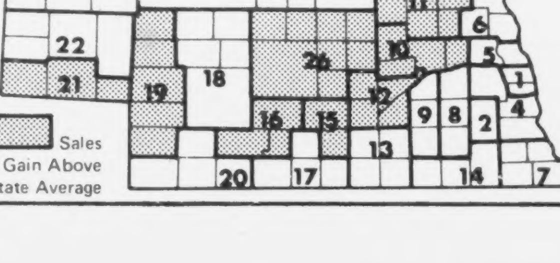
Region Number[1] and City	City Sales[2]	Sales in Region[2]	
	Jan. 1980 as percent of Jan. 1979	Jan. 1980 as percent of Jan. 1979	Year to date'80 as percent of Year to date'79
The State	94.5	94.4	94.4
1 Omaha	90.5	89.9	89.9
Bellevue	81.9		
2 Lincoln	91.9	92.8	92.8
3 So. Sioux City	117.9	99.2	99.2
4 Nebraska City	75.1	85.9	85.9
5 Fremont	89.4	86.8	86.8
Blair	80.2		
6 West Point	93.5	91.8	91.8
7 Falls City	82.9	88.6	88.6
8 Seward	84.1	86.3	86.3
9 York	96.1	91.0	91.0
10 Columbus	94.5	98.6	98.6
11 Norfolk	91.6	96.3	96.3
Wayne	99.3		
12 Grand Island	95.0	96.5	96.5
13 Hastings	95.3	92.0	92.0
14 Beatrice	97.8	94.3	94.3
Fairbury	81.9		
15 Kearney	92.9	94.5	94.5
16 Lexington	95.1	98.3	98.3
17 Holdrege	78.9	89.3	89.3
18 North Platte	88.3	90.4	90.4
19 Ogallala	86.1	101.6	101.6
20 McCook	84.6	90.8	90.8
21 Sidney	90.6	99.2	99.2
Kimball	111.3		
22 Scottsbluff/Gering	98.2	93.3	93.3
23 Alliance	88.5	92.3	92.3
Chadron	73.3		
24 O'Neill	90.0	91.6	91.6
25 Hartington	99.1	97.8	97.8
26 Broken Bow	100.9	100.3	100.3

[1] See region map below.

[2] Sales on which sales taxes are collected by retailers located in the state. Region totals include motor vehicle sales; city totals exclude motor vehicle sales.

Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4) collected. These seasonal adjustment factors changed significantly for cash farm marketings, as patterns of marketings in the late 1970s differed considerably from those established earlier. The chart at the bottom of page 4 graphically illustrates the effect of these changes. As can be seen, many of the sharp movements in Nebraska economic activity, which were evident in previous issues of *Business in Nebraska,* have been moderated.

As a result of its January decrease, the index of nonagricultural activity fell 0.6 percent below the level of January 1979. Previous years have shown that nonagricultural output reflects the underlying trend in the Nebraska economy, while changes in agricultural output produce the sharp month-to-month variations. Since the nonagricultural sectors exhibited considerable weakness during 1979, they should be watched closely during the first few months of 1980. Construction and government appear to be the weakest sectors entering 1980, as their activity dropped during 1979. If nonagricultural output is to increase or maintain previous levels during 1980, the strength will have to come from the manufacturing and distributive sectors.

Employment continued its trend of growth established in 1979, as the number of employed persons increased 1.5 percent in January 1980 compared to January 1979. The gain in employment was nearly 11,000 persons, but it was slightly less than the increase in the labor force so that the number of unemployed also increased. January's unemployment rate of 4.2 percent (seasonally unadjusted), however, was still among the lowest in the nation and compares favorably with the national rate of 6.8 percent. Compared to January 1979, twelve of the twenty-three cities (with available data) registered increases in employment.

After adjustment for price changes, net taxable retail sales in Nebraska for January were 5.6 percent below the sales of January 1979. Retail sales at the national level recorded a 1.3 percent decline over the same period. The January decrease was felt throughout Nebraska, as all but two of the state's twenty-six planning regions had total sales below those of last year. Moreover, non-motor vehicle sales in twenty-nine of the thirty-two principal trading centers were lower than last January's sales. South Sioux City, Kimball, and Broken Bow were the only cities reporting increases.

Relative to January 1979, all of the twenty-three available cities registered losses. The moderate gains in employment were insufficient to offset the losses in retail sales, building activity, and power consumption. Columbus, with a loss of 0.3 percent, was the only city to experience a loss of less than 1 percent.

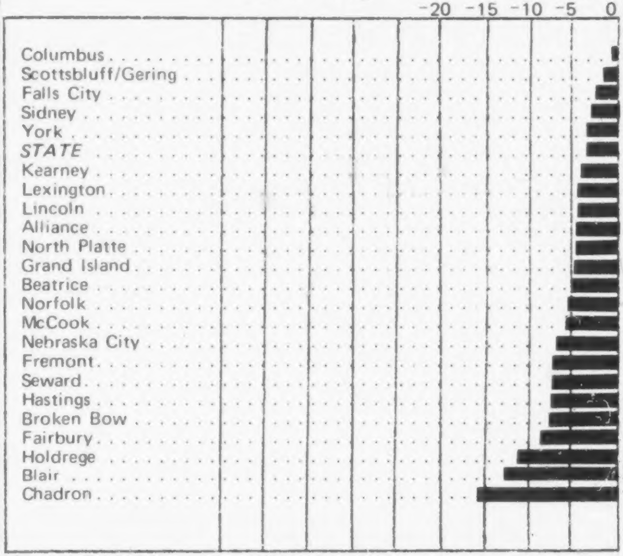
J. A. D.

5. PRICE INDEXES

January 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	233.2	113.9	113.9
Commodity component	222.4	113.6	113.6
Wholesale Prices	254.7	115.4	115.4
Agricultural Prices			
United States	239.0	101.7	101.7
Nebraska	250.0	105.5	105.5

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change Jan. 1979 to Jan. 1980



Source: Table 3 (page 4) and Table 4 below.

4. JANUARY CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	100.5	84.9	88.9
Alliance	108.4	82.9	73.0
Beatrice	98.5	62.1	85.5
Bellevue	NA	79.0	106.3
Blair	100.1	41.1	89.6
Broken Bow	99.3	30.5	77.1
Chadron	96.4	69.0	81.4
Columbus	103.4	156.5	86.4
Fairbury	100.2	83.0	90.8
Falls City	100.3	352.4	87.7
Fremont	94.2	91.2	99.9*
Grand Island	100.1	66.6	88.2
Hastings	97.8	50.9	85.0
Holdrege	104.2	44.8	91.1
Kearney	100.7	97.1	84.6
Lexington	99.4	76.0	89.4
Lincoln	100.7	75.5	96.4
McCook	98.6	203.2	82.4
Nebraska City	106.6	161.4	85.6
Norfolk	100.1	76.4	92.3
North Platte	101.9	108.9	87.7
Omaha	NA	73.8	89.6
Scottsbluff/Gering	98.9	125.8	85.0
Seward	100.0	127.1	81.9
Sidney	99.4	160.3	87.5
So. Sioux City	NA	60.7	85.1
York	99.4	87.6	86.3

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 2)

WHAT CAN BE DONE TO LESSEN THESE COSTS?

The regulatory effort to keep deposit rate ceilings in place is reminiscent of the final stages of our nation's involvement in the infamous Vietnam War. Federal authorities have focused their energies on a few enclaves of savings funds, while guerrilla action has moved more and more household wealth to areas beyond regulators' sphere of control. When the current extension of deposit-rate ceilings expires in December 1980, authorities should plan to accept a staged withdrawal.

In the meantime, much could be done to undo at least the grosser elements of discrimination against small savers that is inherent in the current regulatory structure. First, early withdrawal penalties applicable to certificate accounts could be lightened or (better) deregulated completely. Current penalties impose an excessively punitive forfeiture of promised interest, one that is unrelated to differential costs that early withdrawals actually impose on depository institutions. Households that cannot *confidently* put funds aside until a certificate's maturity date have more to lose than to gain from buying a certificate whose maturity matches the holding period planned for their savings.

Second, the discriminatory effect of early withdrawal penalties need not be heightened by restrictions to minimum denominations. These restrictions could be abandoned or at least relaxed to allow institutions to assist their customers to *pool* their funds into eligible amounts.

Third, the principle of variable-rate ceilings—so successful in the case of money-market certificates—could be extended to passbook accounts.

Fourth, almost no justification exists for regulating interest rates on intermediate and long-term certificates of deposit. Treasury officials could induce industry pressure against regulatory ceilings and minimum denominations for long CDs by offering U.S. savings bonds at more competitive rates and maturities.

A MORAL PERSPECTIVE

In conclusion, let me emphasize that the issue is *not* whether homebuilding or thrift institutions should be subsidized. *Whether* to subsidize something and *how to finance* the resulting subsidy are separate issues. Deposit rate ceilings are far from the only way to help homebuilding and thrifts. The ceilings are merely the *sneakiest* way. They hide the subsidies from public view and leave the dollar magnitudes involved hard to evaluate.

The issue is, who should ultimately pay the freight for subsidizing S&Ls and housing, if indeed the government wants the subsidization to continue. The overriding question is whether our current *means* of helping the beneficiary industries—by a discriminatory system of deposit-rate ceilings—is morally defensible. How can we pretend that the end justifies the means?

EDWARD J. KANE*

---

*Edward J. Kane is Reese Professor of Banking and Monetary Economics at Ohio State University. In addition to other current responsibilities, he is a consultant for the Joint Economic Committee's Special Study on Economic Change and is president of the American Finance Association. Dr. Kane received his Ph.D. in economics at MIT in 1960.

HIGHER INTEREST RATES ON SAVINGS

President Carter signed legislation permitting banks and savings institutions to pay higher interest rates on consumer deposits. The legislation also significantly expanded the Federal Reserve Board's regulatory authority.

The law permits a five-member board to supervise a six-year phaseout of interest ceilings on savings deposits. The legislation established a goal to increase interest ceilings of 0.25 percentage point during the next eighteen months, 0.5 percentage point in the subsequent eighteen months, and 0.5 percentage point per year in the final three years of the phaseout period. Over this six-year interval, regulated rates on savings accounts would be permitted to rise a total of 2.25 percent.

It is hoped that the elimination of interest rate ceilings will stimulate savings by consumers, especially small savers. Regulation Q, according to Professor Kane in the current issue of *Business in Nebraska,* has adversely impacted consumer savings.

The bill also permits interest payments on checking accounts; establishes uniform reserve requirements for all banks; eliminates state usury ceilings on home mortgage rates and business and agriculture loan interest rates (unless state legislatures override the legislation within three years); and increases from $40,000 to $100,000 the amount of bank deposits insured by the Federal Deposit Insurance Corporation.

D. E. P.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska-Lincoln 68588. Material herein may be reproduced with proper credit.

No. 428 May 1980

UNIVERSITY OF NEBRASKA LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

U7860-1 UB
recd 6/12/80

UNL News

Vol. 59 No. 34 June 1980 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

NEBRASKA RETAIL SALES, 1978-1979

Net taxable retail sales in Nebraska were $8,733 million in 1979 (see Table 2, page 2). This represents a dollar volume increase of $932 million over the 1978 figure of $7,801 million.

Most of the increase in retail sales in Nebraska resulted from inflation. On a dollar volume basis, net taxable retail sales were up 12 percent in 1979. Commodity prices, however, were approximately 11.4 percent higher during 1979. When 1979 retail sales were deflated for price using the commodity price index, retail sales were 0.6 percent higher in 1979 than in 1978. Adjusted and unadjusted retail sales for 1978 and 1979 are presented in Table 2. Data for 1978 may not always agree with previously published data since minor revisions have been made.

An analysis of retail sales by the state's planning regions demonstrates that strength in retail sales was outside the state's two major metropolitan areas. A geographic display of above-average gains in retail sales by region are represented in Map 1 (page 6) by the shaded areas. Dollar volume increases in retail sales of 15 percent or more (in numerical order) were recorded in Region 6, 15.2 percent; Region 9, 15.8 percent; Region 10, 15.5 percent; Region 11, 15.0 percent; Region 16, 16.6 percent; Region 19, 16.1 percent; Region 20, 15.8 percent; Region 21, 15.0 percent; Region 24, 20.8 percent; and Region 26, 19.1 percent. Region 24, which includes Boyd, Brown, Cherry, Holt, Keya Paha, and Rock counties, recorded the largest dollar-volume increase of 20.8 percent.

The state's two largest metropolitan regions, Regions 1 and 2, recorded dollar volume increases of 8.9 percent in Region 1, Douglas and Sarpy counties, and 11.7 percent in Region 2, Lancaster County. On a price adjusted basis, retail sales declined in Region 1 while recording a slight increase in Region 2. Douglas County recorded a 9.2 percent increase on a dollar volume basis, while Sarpy County managed a meager 4.7 percent dollar volume increase in retail sales in 1979 compared with 1978.

Outside of the two metropolitan areas, Omaha and Lincoln, retail sales increased 13.7 percent on a dollar volume basis. Adjusted for price changes, the real increase in retail sales was 2.3 percent in the nonmetropolitan area.

The data in Map 2 (page 6) focus

(Continued on page 6)

Table 1
NET TAXABLE RETAIL SALES[1] IN SELECTED NEBRASKA TRADING CENTERS, 1978 AND 1979
WITH PERCENTAGE CHANGES FOR SALES UNADJUSTED AND ADJUSTED FOR PRICE CHANGES

Trade Center	Region[2]	Unadjusted for Price Changes: Thousands of Dollars 1978	Unadjusted for Price Changes: Thousands of Dollars 1979	Unadjusted for Price Changes: Percent of Change	Adjusted for Prices[3]: Percent of Change
Alliance	23	53,179	62,281	17.1	+5.2
Beatrice	14	73,513	82,502	12.2	+0.8
Bellevue	1	91,012	93,885	3.2	-7.3
Broken Bow	26	32,885	38,488	17.0	+5.1
Chadron	23	31,926	36,420	14.1	+2.5
Columbus	10	118,092	135,666	14.9	+3.2
Fairbury	14	31,605	35,019	10.8	-0.5
Falls City	7	29,030	31,454	8.3	-2.7
Fremont	5	136,053	153,657	12.9	+1.4
Grand Island	12	279,530	320,252	14.6	+2.9
Hartington	25	15,192	17,885	17.7	+5.7
Hastings	13	149,701	164,650	10.0	-1.2
Holdrege	17	48,237	53,415	10.7	-0.6
Kearney	15	135,620	155,988	15.0	+3.3
Kimball	21	25,344	29,393	16.0	+4.2
Lexington	16	49,510	56,355	13.8	+2.2
Lincoln	2	803,133	904,897	12.7	+1.2
McCook	20	64,729	76,710	18.5	+6.4
Nebraska City	4	43,041	44,872	4.3	-6.3
Norfolk	11	148,425	170,754	15.0	+3.3
North Platte	18	157,939	180,105	14.0	+2.4
Ogallala	19	44,436	51,910	16.8	+4.9
O'Neill	24	36,215	42,202	16.5	+4.6
Omaha	1	2,002,951	2,209,195	10.3	-1.0
Scottsbluff/Gering	22	158,210	183,058	15.7	+3.9
Seward	8	34,513	40,093	16.2	+4.3
Sidney	21	33,344	38,227	14.6	+2.9
So. Sioux City	3	35,851	36,471	1.7	-8.7
West Point	6	25,790	30,052	16.5	+4.6
York	9	57,150	66,415	16.2	+4.3
Total 30 Centers		4,946,156	5,542,271	12.1	+0.7
Total State[4]		6,924,243	7,776,581	12.3	+0.8

[1] Excluding motor vehicle sales.
[2] Nebraska Planning and Development Regions.
[3] Current dollar sales adjusted (deflated) for price changes using commodity prices component of the Bureau of Labor Statistics' Consumer Price Index.
[4] Total state retail sales include some retail sales that cannot be allocated to cities, counties, or regions.
Source: Compilations by Bureau of Business Research from special tabulations provided by Nebraska Tax Commissioner.

Table 2

NET TAXABLE RETAIL SALES[1] IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS, 1978 AND 1979 BY COUNTIES, WITH PERCENTAGE CHANGES FOR SALES UNADJUSTED AND ADJUSTED FOR PRICE CHANGES

Region and County	Unadjusted for Price Changes			Adjusted for Prices[2]
	Thousands of Dollars		Percent of Change	Percent of Change
	1978	1979		
Region 1	2,432,986	2,649,059	+ 8.9	- 2.2
Douglas	2,265,330	2,473,484	+ 9.2	- 1.9
Sarpy	167,656	175,575	+ 4.7	- 6.0
Region 2	905,028	1,010,753	+11.7	+ 0.3
Lancaster	905,028	1,010,753	+11.7	+ 0.3
Region 3	56,611	58,202	+ 2.8	- 7.7
Dakota	56,611	58,202	+ 2.8	- 7.7
Region 4	179,946	200,169	+11.2	- 0.1
Cass	50,350	55,368	+10.0	- 1.2
Otoe	70,786	77,853	+10.0	- 1.2
Saunders	58,810	66,948	+13.8	+ 2.2
Region 5	240,120	268,591	+11.9	+ 0.5
Dodge	185,964	208,778	+12.3	+ 0.8
Washington	54,156	59,813	+10.4	- 0.9
Region 6	99,760	114,955	+15.2	+ 3.4
Burt	34,713	39,804	+14.7	+ 3.0
Cuming	50,966	59,523	+16.8	+ 4.9
Thurston	14,081	15,628	+11.0	- 0.3
Region 7	103,641	114,495	+10.5	- 0.8
Johnson	18,270	20,184	+10.5	- 0.8
Nemaha	29,708	32,406	+ 9.1	- 2.0
Pawnee	10,777	12,082	+12.1	+ 0.7
Richardson	44,886	49,823	+11.0	- 0.3
Region 8	139,088	158,385	+13.9	+ 2.3
Butler	28,117	31,927	+13.6	+ 2.0
Seward	55,934	63,231	+13.0	+ 1.6
Saline	55,037	63,227	+14.9	+ 3.2
Region 9	138,099	159,921	+15.8	+ 4.0
Fillmore	35,173	41,132	+16.9	+ 5.0
Polk	23,568	27,312	+15.9	+ 4.1
York	79,358	91,477	+15.3	+ 3.5
Region 10	242,077	279,529	+15.5	+ 3.7
Boone	32,238	37,368	+15.9	+ 4.1
Colfax	39,795	46,801	+17.6	+ 5.6
Nance	13,368	15,345	+14.8	+ 3.1
Platte	156,676	180,015	+14.9	+ 3.2
Region 11	300,375	345,351	+15.0	+ 3.3
Antelope	31,708	36,483	+15.1	+ 3.4
Madison	193,556	221,264	+14.3	+ 2.6
Pierce	26,541	30,514	+15.0	+ 3.3
Stanton	11,163	12,523	+12.2	+ 0.8
Wayne	37,407	44,567	+19.1	+ 7.0
Region 12	404,756	463,246	+14.5	+ 2.8
Hall	317,581	362,045	+14.0	+ 2.4
Hamilton	33,618	38,351	+14.1	+ 2.5
Howard	22,019	26,366	+19.7	+ 7.5
Merrick	31,538	36,484	+15.7	+ 3.9
Region 13	251,244	278,788	+11.0	- 0.3
Adams	172,666	189,778	+ 9.9	- 1.3
Clay	31,598	35,511	+12.4	+ 0.9
Nuckolls	30,615	34,468	+12.6	+ 1.1
Webster	16,365	19,031	+16.3	+ 4.4
Region 14	176,319	198,535	+12.6	+ 1.1
Gage	100,908	113,327	+12.3	+ 0.8
Jefferson	45,905	51,210	+11.6	+ 0.2
Thayer	29,506	33,998	+15.2	+ 3.4
Region 15	210,093	240,917	+14.7	+ 3.0
Buffalo	182,253	209,880	+15.2	+ 3.5
Kearney	27,840	31,037	+11.5	+ 0.1
Region 16	131,755	153,638	+16.6	+ 4.7
Dawson	114,546	132,987	+16.1	+ 4.3
Frontier	9,380	11,562	+23.3	+10.7
Gosper	7,829	9,089	+16.1	+ 4.3
Region 17	116,774	131,418	+12.5	+ 1.0
Franklin	15,933	18,034	+13.2	+ 1.7
Furnas	23,755	27,096	+14.1	+ 2.5
Harlan	15,706	18,112	+15.3	+ 3.5
Phelps	61,380	68,176	+11.1	- 0.2
Region 18	200,142	227,903	+13.9	+ 2.3
Hooker	3,340	4,062	+21.6	+ 9.2
Lincoln	190,475	216,215	+13.5	+ 1.9
Logan	1,893	2,176	+14.9	+ 3.2
McPherson	754	1,002	+32.9	+19.3
Thomas	3,680	4,448	+20.9	+ 8.6
Region 19	105,793	122,797	+16.1	+ 4.3
Arthur	1,148	1,307	+13.9	+ 2.3
Chase	26,985	31,378	+16.3	+ 4.4
Grant	3,124	3,696	+18.3	+ 6.2
Keith	55,692	64,746	+16.3	+ 4.4
Perkins	18,844	21,670	+15.0	+ 3.3
Region 20	99,288	114,949	+15.8	+ 4.0
Dundy	10,867	11,352	+ 4.5	- 6.2
Hayes	1,935	2,469	+27.6	+14.6
Hitchcock	8,810	10,137	+15.1	+ 3.4
Red Willow	77,676	90,991	+17.1	+ 5.2
Region 21	82,951	95,395	+15.0	+ 3.3
Cheyenne	43,371	49,434	+14.0	+ 2.4
Deuel	9,931	11,410	+14.9	+ 3.2
Kimball	29,649	34,551	+16.5	+ 4.6
Region 22	236,877	270,480	+14.2	+ 2.6
Banner	1,264	1,661	+31.4	+18.0
Garden	10,174	11,364	+11.7	+ 0.3
Morrill	27,747	32,692	+17.8	+ 5.8
Scotts Bluff	197,692	224,763	+13.7	+ 2.1
Region 23	147,474	169,384	+14.9	+ 3.2
Box Butte	64,086	74,270	+15.9	+ 4.1
Dawes	41,482	47,376	+14.2	+ 2.6
Sheridan	38,740	44,123	+13.9	+ 2.3
Sioux	3,166	3,615	+14.2	+ 2.6
Region 24	143,674	173,558	+20.8	+ 8.5
Boyd	9,981	11,487	+15.1	+ 3.4
Brown	22,926	26,698	+16.5	+ 4.6
Cherry	31,006	36,944	+19.2	+ 7.0
Holt	63,544	77,874	+22.6	+10.1
Keya Paha	2,415	2,936	+21.6	+ 9.2
Rock	13,802	17,619	+27.7	+14.7
Region 25	95,103	108,693	+14.3	+ 2.6
Cedar	39,705	45,706	+15.1	+ 3.4
Dixon	15,802	16,962	+ 7.3	- 3.6
Knox	39,596	46,025	+16.2	+ 4.3
Region 26	121,404	144,625	+19.1	+ 7.0
Blaine	1,944	2,169	+11.6	+ 0.2
Custer	56,321	68,481	+21.6	+ 9.2
Garfield	10,142	11,987	+18.2	+ 6.1
Greeley	9,917	12,213	+23.2	+10.6
Loup	1,347	1,686	+25.2	+12.4
Sherman	13,248	15,605	+17.8	+ 5.8
Valley	26,171	29,755	+13.7	+ 2.1
Wheeler	2,314	2,729	+17.9	+ 5.9
State Total[3]	7,801,152	8,733,485	+12.0	+ 0.6

[1] Motor vehicle sales are recorded as in counties in which the vehicles were first registered regardless of point of sale.

[2] Current dollar sales adjusted (deflated) for price changes using commodity prices component of the Bureau of Labor Statistics' Consumer Price Index.

[3] Total state retail sales include some retail sales that cannot be allocated to cities, counties, or regions.

Source: Compilation by Bureau of Business Research, University of Nebraska-Lincoln, from tabulations provided by the Nebraska Tax Commissioner.

MID-YEAR ECONOMIC REVIEW

By most indications, the United States would now appear to be in a recession. Signs of the recession include the sharp decrease in automobile sales, the extremely slow housing construction area, the slowdown in retail sales, and the March decrease in employment. April's personal income was up a scant one-tenth of one percent over March. Reflecting this slowdown has been the precipitous decline in interest rates, with the twenty-six week bill rate dropping from a peak of 15.70 percent in March down to 8.78 percent in early May.

A decline in real output is developing as real consumer income levels drop. Lower real income has resulted in reduced purchases of gasoline, food and clothing, and durable goods. Up to this point, it appears that consumers have protected their standards of living by reducing savings, dipping into savings to finance the consumption, and by going into debt. Consumers are now finding it increasingly difficult to obtain credit and, since savings levels have been reduced by decreases in the rate of savings and inflation, it appears likely that a decrease in consumption is all but inevitable.

With savings and credit now less likely to extend purchasing power, rising levels of unemployment will contribute toward further reductions in consumer spending. The three-hundred thousand decrease in employment of March of 1980 will further depress consumer incomes. Employment has been increasing month after month, but the March statistics show a sharp break in that pattern.

The recession is likely to be deeper than anticipated a few months earlier, but should be over by late 1980 or early 1981. The decrease in real output is expected to range between –2 and –4 percent on an annualized basis during the recession. While this is a more severe recession than anticipated, it is not as severe as the 1974-75 recession.

Nebraska will be somewhat insulated from the recession, although the state may not be as well protected as it was during 1974-75. Nebraska's employment base is relatively stable and, while unemployment may approach 8 percent nationally, Nebraska's unemployment rate should remain well below the national level—somewhere in the vicinity of 4.5 percent (annual average). Nebraska's personal income has plateaued, reflecting the slowdown in the economy and the depressed agriculture sector. Wage and salary disbursement continue to increase (see table), although the rate of increase is below that recorded in previous periods. Fourth quarter 1979 data indicate that nonfarm income is up by more than 800 million, while farm income is down in Nebraska by almost 400 million. There is little encouragement in the statistics for 1980 since livestock and grain prices are expected to be under considerable pressure. Two factors are operating to improve receipts in the livestock sector. First, the basic supply and demand relationship should lead to higher prices later in 1980. Since demand is directly linked to consumer income levels, higher incomes in 1981 could lead to further increases in livestock prices. A modest improvement in livestock prices and cash receipts late in 1980 could help the state's economic situation.

Grain prices are depressed and are expected to remain under pressure in 1980 before some slight improvement in 1981. Drought or some other natural disaster, such as a grasshopper plague, would impact the state more severely than depressed prices resulting from a bumper crop. Despite low grain prices, the concomitant economic activity of grain shipments would continue. Drought would be a double misfortune for less grain would be harvested and the associated shipping actions restricted.

Modest improvements in consumer income in 1981 should help move the U.S. and Nebraska economies into a more prosperous phase. As consumers improve their liquidity position and as monetary policy permits an easing of credit conditions, consumer purchases of goods and services should expand, leading to increased output and employment. Recovery is likely to be rather slow as higher social security taxes and higher federal tax income rates on inflated income levels reduce consumers' ability to increase their purchases of goods and services.

The recovery from the recession will be accompanied by a higher than usual rate of inflation for a recovery phase. Prices are likely to increase 7 to 8 percent (CPI basis) during 1981. By comparison, consumer prices were increasing at an approximate annual rate of 6 percent after the 1974-75 recession. D. E. P.

NEBRASKA PERSONAL INCOME
Seasonally Adjusted Annual Rates in Millions of Dollars

Industry	1978 1st Quarter	1978 2nd Quarter	1978 3rd Quarter	1978 4th Quarter	1979 1st Quarter	1979 2nd Quarter	1979 3rd Quarter	1979 4th Quarter
Farm	804	1,017	894	1,314	960	1,260	1,149	924
Non-Farm	7,508	7,838	8,080	8,325	8,528	8,714	8,976	9,159
Manufacturing	1,310	1,382	1,441	1,485	1,529	1,589	1,630	1,673
Transportation and Public Utilities	817	835	856	903	971	963	1,028	1,066
Wholesale Trade	666	686	703	715	752	778	797	811
Retail Trade	868	909	934	956	991	1,013	1,034	1,046
Finance, Insurance, and Real Estate	552	581	597	612	616	638	663	683
Services	1,215	1,260	1,305	1,337	1,387	1,399	1,459	1,507
Government	1,454	1,490	1,518	1,578	1,586	1,616	1,617	1,632
Personal Income by Place of Residence	11,068	11,645	11,878	12,645	12,543	13,107	13,405	13,463

Source: Bureau of Economic Analysis, Department of Commerce. (Subject to revision.)

Review and Outlook

The level of economic activity in Nebraska was unchanged in February, although two of the five sectors reported increases when compared to January. The state's index of real output fell 0.1 percent below its value of last year. Nationally, the index fell 0.7 percent during the month and was down 1.2 percent from February 1979.

Even though the Nebraska economy as a whole exhibited no change in output in February, there were changes in activity in the sectors of the economy. The index for the agricultural sector rose 8.7 percent, while the composite index for the nonagricultural sectors fell 1.0 percent. Government, with an increase of 0.6 percent, was the only nonagricultural sector registering a gain. The month-to-month losses in the remaining sectors were: manufacturing, -0.4 percent; distributive, -1.3 percent; and construction, -6.9 percent.

The indecisive movement of the Nebraska economy during 1979 carried over into the first two months of 1980. The physical volume index for the state reached its peak in November 1978, with a value of 145.6. Since then, the index has plateaued. There have been month-to-month fluctuations, but no discernible trend in either direction. Currently, the index is 0.5 percent below its peak.

Recently released estimates of personal income for Nebraska seem to support the contention that economic activity in Nebraska has leveled off. Since the

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

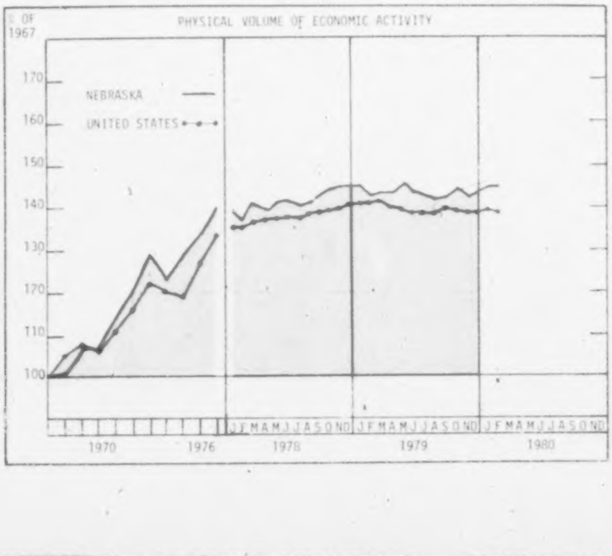
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

February 1980	Current Month as Percent of Same Month Previous Year		1980 Year to Date as Percent of 1979 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	111.0	111.5	111.0	111.8
Agricultural	115.6	106.8	111.0	106.2
Nonagricultural	110.4	111.7	111.0	112.0
Construction	83.7	114.8	85.9	116.3
Manufacturing	118.0	115.2	118.7	115.3
Distributive	112.1	110.8	112.8	111.2
Government	101.9	107.0	102.0	106.9
Physical Volume	99.9	98.8	99.8	99.1
Agricultural	114.1	108.2	107.5	106.0
Nonagricultural	98.2	98.5	98.9	98.9
Construction	75.7	103.8	77.8	105.3
Manufacturing	103.1	99.2	104.0	99.5
Distributive	98.2	97.1	98.9	97.5
Government	97.4	101.5	97.5	101.5

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	334.8	315.3
Agricultural	322.9	326.9
Nonagricultural	336.4	314.9
Construction	251.6	322.4
Manufacturing	360.3	288.4
Distributive	348.0	333.0
Government	301.3	298.5
Physical Volume	144.8	138.8
Agricultural	132.3	137.9
Nonagricultural	146.6	138.9
Construction	88.9	113.9
Manufacturing	172.0	136.2
Distributive	147.2	140.9
Government	138.4	146.4



3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number and City	City Sales*	Sales in Region*	
	Feb. 1980 as percent of Feb. 1979	Feb. 1980 as percent of Feb. 1979	Year to date'80 as percent of Year to date'79
The State	99.8	98.2	96.3
1 Omaha	93.8	94.0	91.9
Bellevue	94.2		
2 Lincoln	96.4	95.0	93.9
3 So. Sioux City	95.7	91.2	95.3
4 Nebraska City	82.9	91.6	88.7
5 Fremont	83.5	86.3	86.6
Blair	95.4		
6 West Point	90.4	93.1	92.5
7 Falls City	100.1	98.5	93.2
8 Seward	102.3	96.9	91.4
9 York	99.4	98.9	94.7
10 Columbus	126.1	112.8	105.4
11 Norfolk	96.1	95.4	95.8
Wayne	100.6		
12 Grand Island	97.0	95.0	95.8
13 Hastings	97.1	97.1	94.4
14 Beatrice	93.6	93.7	94.0
Fairbury	103.3		
15 Kearney	99.7	91.9	93.2
16 Lexington	85.1	87.5	92.9
17 Holdrege	97.7	95.3	92.2
18 North Platte	88.5	87.7	89.1
19 Ogallala	70.6	81.8	92.0
20 McCook	94.9	95.6	93.1
21 Sidney	86.5	83.0	90.8
Kimball	78.2		
22 Scottsbluff/Gering	96.4	94.8	94.0
23 Alliance	92.7	87.6	90.0
Chadron	67.8		
24 O'Neill	92.8	90.1	91.0
25 Hartington	88.8	89.3	93.5
26 Broken Bow	104.1	102.1	101.2

*State totals include sales not allocated to cities or regions. The year-to-year ratios for city and region sales may be misleading because of changes in the portion of unallocated sales. Region totals include, and city totals exclude, motor vehicle sales. Sales are those on which sales taxes are collected by retailers located in the state. Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS

23
24
25
11
3
6
22
10
5
26
1
21
19
18
12
4
16
15
9
8
2
13
20
17
14
7
Sales Gain Above State Average

(Continued from page 4) fourth quarter of 1978, it appears that there has been very little, if any, increase in real personal income. In fact, the data indicate that Nebraska may have entered a mild recessionary period in the third quarter of 1979.

The index of activity in the agricultural sector has recorded sizable increases during the first two months of 1980, but is still slightly below its peak recorded in November of 1978. The index for this sector can be misleading because it is designed to measure the movement of agricultural products (by using price and seasonally adjusted cash farm marketings) and not farm income. Despite the increases in the index, declines in agricultural prices have limited the stimulus by this sector to the rest of the state economy.

In February, prices received by Nebraska farmers fell 2.4 percent. Since December 1979, they have dropped 4.3 percent and are currently 1.2 percent above their level of February 1979. Prices paid, on the other hand, have increased 13.1 percent since last February.

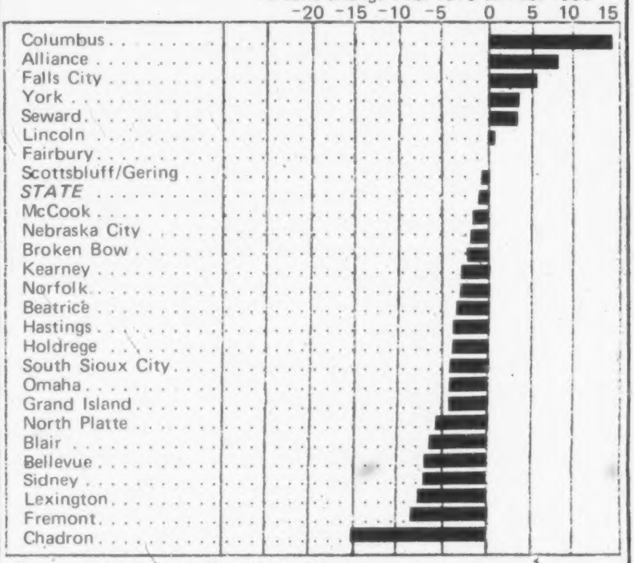
Given the lackluster performance of the state economy during the past year, it is somewhat surprising that employment has shown consistent gains. The amount of employment increased 1.5 percent (nearly 11,000 persons) in February 1980 as compared to February 1979. At the same time, unemployment accounted for 3.9 percent of the labor force. Seventeen of the twenty-six reporting cities registered gains in employment. These increases were spread throughout the state, and for the first time in several months all four of the cities in the metropolitan counties experienced increases.

Net taxable retail sales in Nebraska for February were 1.8 percent below the sales of February 1979, after adjustment for price changes. At the national level, retail sales were down 3.2 percent from last February. Sales were down in all but two of the state's twenty-six planning regions. In addition, non-motor vehicle sales in twenty-seven of the thirty-two principal trading centers were lower than last February's sales. Columbus, Broken Bow, Seward, Wayne, and Falls City were the cities reporting increases. Year-to-year changes in city and region sales should be interpreted with caution, however, because each month a varying portion of the state's sales are not allocated to cities or regions, and there is no way to determine the extent of this effect on individual cities or regions.

Relative to February 1979, nineteen of the twenty-six cities registered losses. The moderate gains in employment were insufficient to offset the losses in retail sales, building activity, and power consumption. Columbus recorded the largest gain in activity, with an increase of 14 percent. Other cities with February-to-February increases were Alliance, Falls City, York, Seward, and Lincoln.

J. A. D.

CITY BUSINESS INDEXES
Percent Change Feb. 1979 to Feb. 1980



Source: Table 3 (page 4) and Table 4 below.

4. FEBRUARY CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.4	78.7	97.0
Alliance	109.6	100.5	170.4
Beatrice	99.5	58.4	117.3
Bellevue	102.3	80.7	58.2
Blair	101.1	41.6	93.3
Broken Bow	100.3	49.0	92.1
Chadron	97.7	95.8	85.5
Columbus	103.7	154.6	102.0
Fairbury	99.9	66.5	104.1
Falls City	101.2	348.5	97.0
Fremont	99.0	85.7	95.5*
Grand Island	99.3	59.8	94.1
Hastings	98.5	64.3	98.0
Holdrege	105.9	34.3	92.6
Kearney	101.1	62.2	87.1
Lexington	99.8	83.0	93.8
Lincoln	102.1	100.9	110.1
McCook	99.2	144.4	94.2
Nebraska City	108.9	165.7	95.7
Norfolk	100.1	69.1	99.8
North Platte	102.3	103.3	80.9
Omaha	102.3	56.9	97.7
Scottsbluff/Gering	99.4	132.4	98.6
Seward	101.8	134.8	102.2
Sidney	100.4	111.5	81.9
So. Sioux City	100.4	73.1	87.2
York	100.3	156.7	114.5

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

February 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	236.4	114.1	114.0
Commodity component	225.2	113.6	113.6
Wholesale Prices	259.8	115.9	115.6
Agricultural Prices			
United States	237.0	98.8	100.2
Nebraska	244.0	101.2	103.3

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(Continued from page 1)

upon counties where the dollar volume increase in retail sales was above the state's 12 percent average in 1979. Well over half the state's counties recorded dollar volume increases in excess of the state's average. Frontier County recorded a 23.3 percent increase in 1979 over 1978; McPherson County, a 32.9 percent increase; Thomas County, 20.9 percent; Hayes County, 27.6 percent; Holt County, 22.6 percent; Keya Paha County, 21.6 percent; Rock County, 27.7 percent; Greeley County, 23.2 percent; and Loup County, 25.2 percent. The dollar volume in many of these counties is relatively small, so consequently a rather minor change by the state's standard in the dollar volume retail sales could lead to a substantial increase at the county level. For the retailing communities involved, dollar volume gains of more than 20 percent are significant.

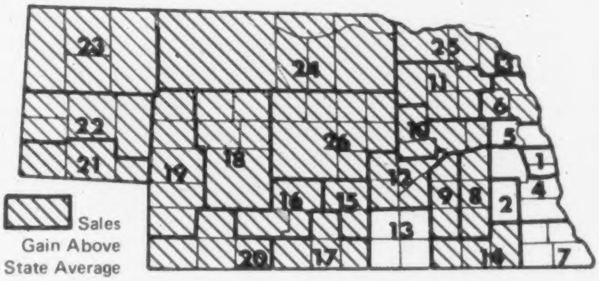
Taxable net retail sales for the thirty major trade centers are summarized in Table 1, page 1. Total taxable retail sales were up 12.3 percent for these thirty centers on a dollar volume basis. When adjusted for price increases, real retail sales increased 0.8 percent (the data in Table 1 exclude motor vehicle sales).

Trade centers with above-average increases in retail sales include (alphabetically) Alliance, Broken Bow, Chadron, Columbus, Fremont, Grand Island, Hartington, Kearney, Kimball, Lexington, Lincoln, McCook, Norfolk, North Platte, Ogallala, O'Neill, Scottsbluff/Gering, Seward, Sidney, West Point, and York. McCook has the distinction of recording the highest dollar volume increase in the state of 18.5 percent. Dollar volume retail sales in McCook increased from $64.7 million in 1978 to $76.7 million in 1979. Broken Bow, Hartington, Kimball, Ogallala, O'Neill, West Point, and York recorded increases of 16 percent or more. Alliance recorded an increase of 17.1 percent, and continues its rapid development reflecting the increased coal hauling.

D. E. P.

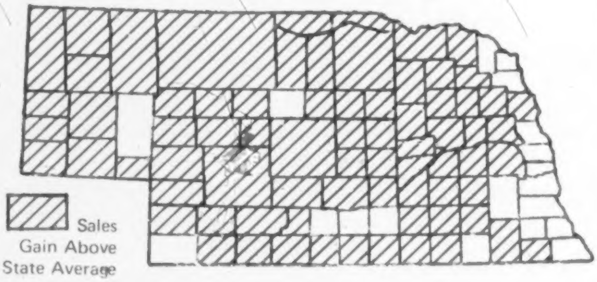
Map 1

RETAIL SALES INCREASE
ABOVE STATE AVERAGE
BY STATE PLANNING AND DEVELOPMENT REGION



Map 2

RETAIL SALES INCREASE
ABOVE STATE AVERAGE
BY COUNTY



UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska-Lincoln 68588. Material herein may be reproduced with proper credit.

No. 429 June 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

CONGRESSIONAL INFO SERVIC274388 BR
SRI-ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

6

U 7860-1 UA
Rec'd 7/16/80

UNL News
Vol. 60 No. 1 July 1980 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

THE CRUDE OIL WINDFALL PROFIT TAX

On April 2, President Carter signed into law the Crude Oil Windfall Profit Tax Act of 1980 (Act, hereafter). The purpose of the Act is to collect from producers of domestic crude oil and royalty holders of oil-producing properties a portion of the so-called "unearned profits" which are received due to price increases of oil on world markets. These increases have mainly been due to actions of the Organization of Petroleum Exporting Countries (OPEC). Although Nebraska accounts for a very small proportion of domestic oil production, there are several reasons for presenting a discussion of the tax here. First, oil production is an important income source for a number of counties in Nebraska, all of which, with the exception of Richardson County, are in the western part of the state. Second, the geographical distribution of royalty interest ownership in Nebraska oil includes numerous counties and other states. Third, the tax is a major component of national energy policy and will therefore affect every citizen of the United States in some way. Before summary judgments about the tax can be made, it is only logical that the mechanics of the tax be understood. As is the case with most revenue legislation, the Act contains a maze of deductions, exclusions, special treatments, and unique provisions, too numerous to present all of them here. However, there are common themes in the Act which form the basis for administering the tax. These will be discussed.

The Act, as signed by the President, imposes a set of tax rates on various classifications of oil production and types of producers *at the barrel level,* and is designed to collect a net total of $227.3 billion before a 33-month phaseout of the tax begins. The Secretary of the Treasury is responsible for initiating the phaseout period, once it is determined that the $227.3 billion total (net of tax refunds and Federal income tax reductions for producers due to the windfall tax) has been collected. The Act stipulates that the beginning of the phaseout period will be the month following the *later* of December 1987 or the month in which the Secretary of the Treasury declares that the $227.3 billion goal has been reached. Should tax receipts attain the goal more quickly than anticipated, total taxes collected until complete phaseout will exceed the target by a substantial amount. The funds have been earmarked for three uses: income tax reductions, low-income assistance, and energy and transportation programs. For any given year, the basic net revenues will be allocated as follows: 60 percent for income tax reductions, 25 percent for low-income assistance, and 15 percent for energy and transportation. If the total taxes collected in any given year exceed projections, one-third of any additional amounts will be allocated to low-income assistance and the remaining two-thirds to income tax reductions.

In the broadest terms, the tax to be collected on a given barrel of oil is determined by applying a tax rate only to that fraction of the barrel's price that is considered to be a windfall profit. This windfall profit (*WP*) amount is calculated as:

(1) $WP =$ (Removal price − Adjusted Base Price) (1 − State Severance Tax Rate),

while the actual windfall profit tax (*WPT*) collected is:

(2) $WPT =$ tax rate x WP.

The removal price of oil is the amount for which the barrel is sold to the first purchaser. The other components will be discussed in each formula below. The tax applies to all domestic crude oil, with the exception of certain types of oil that have been exempted.

PRODUCTION CLASSES, PRODUCER CLASSES, AND TAX RATES

Oil which is not exempt is classified by the Act into three "tiers." Tier Three includes newly discovered oil (oil taken from a property where production began after January 1, 1979), heavy oil (16 degrees API or less at 60°F), and incremental tertiary oil (oil which is recovered in a qualified project using tertiary recovery methods, such as carbon dioxide injection). Tier Two contains "stripper" oil and oil from an interest in a National Petroleum Reserve, and excludes all Tier Three oil. Under the Act, a stripper well is one which has not produced more than an average of 10 barrels of oil per day during any twelve-month period after December 31, 1972. Finally, Tier One oil is taxable oil which is not categorized as Tier Three or Tier Two, and might be termed "old" oil.

Six basic tax rates are specified in the Act, the result of two classifications or types of producers and the three classifications or types of production previously noted. The Act classifies producers into two groups, independent producers and nonindependent producers. Nonindependent producers are those firms who not only remove crude oil from the ground but are also involved in the further processing of the oil for sale, and who own either refineries or retail outlets in addition to working interests in the wells themselves. Independent producers, on the other hand, are involved only with the initial production of crude oil. However, should an independent produce more than 1,000 barrels of oil daily, the tax rates of the nonindependent producers are applicable to any amounts of oil which exceed the 1,000 barrels per day limit.

Given the above producer and tier classifications, the six tax rates to be applied to windfall profits are as follows:

(Continued on page 2)

(Continued from page 1)

	Tier 1	Tier 2 (in percent)	Tier 3
Independent Producers	50	30	30
Nonindependent Producers	70	60	30

Royalty interests are taxed at the same rates as the nonindependent producers (the highest set of rates), even though the property may be operated by an independent producer. It is important at this point to recall that the above rates are *not* directly applied to the removal price of oil, but rather to the windfall profit portion of a barrel's price which was shown in Formula (1).

ILLUSTRATION OF THE TAX COMPONENTS

Although many details are involved in computing the actual tax and net price per barrel (after-tax price), two merit special note here. First, the tax per barrel cannot exceed 90 percent of the net income attributable to that barrel, where

$$\frac{\text{Net Income Attributable}}{\text{Barrel}} = \frac{\text{Taxable income of property in taxable year attributable to taxable crude oil}}{\text{No. of barrels of taxable crude oil produced from the property during the taxable year.}}$$

Next is the term *base price,* possibly the most important concept in the Act. There are base prices for each tier, and they are designed to give an approximation of the price which would be carried by crude oil produced in the United States had there been no OPEC affecting the world market price. Thus, the concept is essentially a creation of U.S. energy policy. The base price for each tier is adjusted upward in each taxable period to reflect the overall inflation in the economy. It is this adjusted base price which appears in Formula (1) for the windfall profit of a given barrel.

Table 1 will aid in the description of the calculations involved in the Act. The columns are each labeled by a letter which will be used in the calculation of the tax in the examples to be given later. Column A is the removal price per barrel of oil produced. These future prices were obtained from the High Plains-Ogallala Aquifer Study in which the authors are currently participating. The removal price as shown in the table is an "average" of expected prices, taking into account current pricing schemes, current oil classification schemes, and the ongoing deregulation of domestic oil prices. Column B shows the Windfall Profit Tax (*WPT*) rates according to the type of producer and production. Column C indicates the percentage of the tax rate to be applied in a given year. For those years in which the tax is in full force, this figure is 100 percent. In 1980, the tax is to be applied beginning March 1, so the tax is in force only for the final ten months of 1980. The percentage of the tax applicable in 1980 is, thus, 83 1/3 percent. The percentages of the applicable tax rates for the years 1988-1990 are reduced due to the phaseout of the tax. It is assumed that revenues will attain the $227.3 billion goal during or before December, 1987. To incorporate the effects of the phaseout period, the tax rate will be multiplied by the phaseout percentage, which will drop at a rate of 3 percent per month. Over the first year of the phaseout (1988), the effective annual percentage rate would be about 80.5 percent, the next year would carry an effective rate of about 44.5 percent, and the final phaseout year would carry an effective rate of about 9.6 percent.

Column D contains the base prices which result from the specified calculations in the Act. For Tier One oil, the Act specifies that the base price be the ceiling price for "Upper Tier" oil (an oil type defined under current pricing schemes that are being gradually dismantled) sold in May 1979 less 21 cents. Since the "Upper Tier" ceiling price was $13.02 per barrel at that time, the base price for Tier One oil is therefore $12.81 per barrel. The base prices for Tiers Two and Three oil are to be set by the Secretary of the Treasury, who, at the time of this writing, has not yet issued the price. The Act does specify, however, that the eventual base prices should approximate, with respect to oil of any grade, quality, and field, the December 1979 prices for oil in those categories, under the assumption that all domestic crude was uncontrolled and that the average removal price for all domestic crude oil was $15.20 per barrel for Tier Two and $16.55 for Tier Three.

Until the Secretary arrives at the base prices for Tiers Two and Three oil, an "Interim Rule" is in effect. The rule states that the Tier Two base price for a particular property will be found by multiplying the highest posted price for uncontrolled crude oil of the same grade, quality, and field on December 31, 1979 by the

Table 1
COMPONENTS OF THE WINDFALL PROFIT TAX CALCULATION

	A	B			C	D		E		F
Year	Removal Price/BBL	Windfall Profit Tax Rate (%)			% of WPT Applied	Base Price		Inflation Adjustment		Severance Tax Rate (%)
			Ind.	Nonind.				Tiers 1 & 2	Tier 3	
1980	$24.80				83.33			1.05	1.06	2.12
		Tier 1	50	70		Tier 1	$12.81			
		Tier 2	30	60		Tier 2	15.20			
		Tier 3	30	30		Tier 3	16.55			
1981	27.74				100.0			1.14	1.18	2.10
1982	31.02				100.0			1.22	1.29	2.10
1983	34.70				100.0			1.31	1.41	2.10
1984	38.80				100.0			1.40	1.54	2.10
1985	43.40				100.0			1.50	1.68	2.10
1986	46.62				100.0			1.60	1.83	2.10
1987	50.09				100.0			1.72	2.00	2.10
1988	53.81				80.46			1.84	2.19	2.10
1989	57.81				44.46			1.96	2.38	2.10
1990	62.10				9.64			2.10	2.60	2.10
1991	66.71				0.0			2.25	2.84	2.10

fraction $\frac{\$15.20}{\$35.00}$. If the highest posted price was $35.00 per barrel at that time, the base price without adjustments would be $15.20, since the $35.00 figures would cancel. For Tier Three oil, the highest posted price is to be multiplied by $\frac{\$16.55}{\$35.00}$. In the event that no oil in the field was uncontrolled, the posted price is taken from the nearest field in which there was uncontrolled oil of a similar grade and quality. The calculations which follow below are made under the assumption that the highest posted price was, indeed, $35.00 per barrel on December 31, 1979.

It should be emphasized that the base prices shown in Table 1 are only averages, and are thus applicable only to an "average" grade, quality, and field where the oil is removed from the ground. Only in this way could any type of aggregate analysis be performed. In addition, the removal prices shown are forecasted average prices for Nebraska oil and the actual removal price on any particular property may vary from the price shown. Producers will, of course, use the actual removal price of their oil in the calculation of their taxes.

Column E in Table 1 shows the inflation adjustment factors used to inflate the base price and arrive at the adjusted base price. For Tiers One and Two, the inflation adjustment factor in any quarter is the ratio of the Gross National Product (GNP) deflator two quarters ago to the GNP deflator in the second quarter of 1979. For Tier Three, the factor is the deflator ratio multiplied by $(1.005)^n$ where n is the number of calendar quarters beginning after September 1979 and before the calendar quarter in which the oil is removed. An annual increase of 7 percent in the deflator was assumed throughout the duration of the tax. Since the deflator may be revised a number of times, the Act specifies that the first revision of the deflator is to be used. Note that an adjusted base price will, in practice, be calculated every quarter, since tax liabilities are determined on a quarterly basis. In the present analysis, however, the removal prices are available only on an annual basis and may be viewed as pertaining to midyear. Thus, the inflation adjustment factors (quarterly concepts) were modified appropriately to be on an annual basis.

Column F is the severance tax adjustment. The Act allows state severance taxes collected on the difference between the removal price and the adjusted base price to be deleted from that difference before the relevant windfall tax rate is applied. Alternatively, this adjustment may be viewed as decreasing from 100 percent the percentage of the difference between the removal and adjusted base price that is subject to the windfall tax. (See Formula (1) for windfall profits.) State severance taxes are therefore not a dollar-for-dollar credit. In Nebraska, the severance tax rate applied to the value of oil produced is 2 percent. However, the Act defines a severance tax as a tax imposed by a state on the extraction of oil and determined on the basis of the gross value of the extracted oil. Nebraska also imposes an oil conservation tax which fits the Act's description of a severance tax. The conservation tax was reduced from .15 percent to .1 percent on July 1, 1980. Thus, for the years after 1980, the severance and conservation tax rate will be 2.1 percent. For 1980, the old rate of 2.15 percent applies for the months March-June, and the new rate of 2.1 percent will apply for July-December. For this reason, the 1980 weighted average severance and conservation tax rate to be used in the present calculations is 2.12 percent.

TAX CALCULATION EXAMPLES AND NEBRASKA EFFECTS

Using the Conference Report on the Crude Oil Windfall Profit Tax Act of 1980,[1] the formula for calculating the windfall tax on a particular barrel can be developed. Employing the letters on the columns in Table 1 as variables, the formula can be written as follows:

$$WPT_{ijt} = (B_{ijt} \cdot C_t) \cdot [(A_t - (D_i \cdot E_{it}))(1 - F_t)]$$

where WPT_{ijt} = Windfall Profit Tax for production tier i (i = 1, 2, 3) and producer class j (j = independent, nonindependent) in time period t.

Table 2 shows the resulting tax per barrel of crude oil for each type of producer and classification of oil, using the formula above. To seek the tax on, say, a barrel of Tier One oil removed by an independent producer in 1980, the following figures from Table 1 would be used: A = $24.80, B = 50 percent, C = 83.33 percent, D = $12.81, E = 1.05, and F = 2.12 percent, and would be placed in the formula above as follows:

$$WPT = (.5 \cdot .8333) \cdot [(24.80 - (12.81 \cdot 1.05))(1 - .0212)]$$
$$= \$4.63 \text{ per barrel.}$$

Suppose the per barrel tax on new oil in 1980 was sought. As can be seen in Column B of Table 1, oil in this category is taxed at the rate of 30 percent, regardless of the classification of the producer removing it. To calculate the tax, the following formula would be used:

$$WPT = (.3 \cdot .8333) \cdot [(24.80 - (16.55 \cdot 1.06))(1 - .0212)]$$
$$= \$1.78 \text{ per barrel.}$$

Using these figures, the after-tax price per barrel, that is, the net amount a producer can expect to be paid for each barrel of oil sold, can be calculated by subtracting the tax for a given oil and producer classification from the removal price. For example, the price obtained for Tier Two oil by an independent producer in 1986 is expected to be $40.07 ($46.62 - 6.55).

Table 3 (p. 6) presents the effective tax percentages (actual tax as a percentage of removal price) for each producer and tier classification. It is apparent from the table

(Continued on page 6)

Table 2
WINDFALL PROFIT TAX PER BARREL*

Year	Removal Price	Independent Tier 1	Independent Tier 2	Nonindependent Tier 1	Nonindependent Tier 2	New Oil Tier 3
1980	$24.80	$ 4.63	$2.16	$ 6.48	$ 4.33	$1.78
1981	27.74	6.43	3.06	9.00	6.12	2.41
1982	31.02	7.53	3.66	10.55	7.33	2.84
1983	34.70	8.77	4.34	12.28	8.69	3.34
1984	38.80	10.21	5.14	14.30	10.29	3.91
1985	43.40	11.84	6.05	16.57	12.10	4.58
1986	46.62	12.79	6.55	17.90	13.10	4.80
1987	50.09	13.73	7.03	19.23	14.07	4.99
1988	53.81	11.91	6.10	16.67	12.21	4.15
1989	57.81	7.12	3.66	9.96	7.32	2.41
1990	62.10	1.66	.85	2.33	1.71	.54
1991	66.71	.00	.00	.00	.00	.00

*The GNP deflator is assumed to increase 7 percent annually over the duration of the Windfall Tax. Removal prices are taken from High Plains-Ogallala Aquifer Study and are intended to be representative prices of Nebraska oil.

---

[1] "Crude Oil Windfall Profit Tax Act of 1980," Conference Report No. 96-817, 96th Congress, Second Session, March 7, 1980.

Review and Outlook

The condition of the Nebraska economy weakened considerably in March, with decreases in most of the major economic indicators for the state. The physical volume index for the state fell 1.8 percent from its February level and was 1.7 percent below its value of March 1979. Nationally, the index fell 1.0 percent from February and was down 2.0 percent from last year.

The February-to-March decrease for Nebraska was concentrated in the nonagricultural sectors, where output fell 2.3 percent. Construction was the weakest sector and recorded a loss of 5.6 percent. The month-to-month losses for the remaining nonagricultural sectors were distributive, -2.8 percent; manufacturing, -1.8 percent; and government, -0.1 percent.

In March, the index for the agricultural sector rose 1.6 percent. Although this was the third consecutive monthly increase in this index (as measured by price adjusted and seasonally adjusted cash farm marketings), the farm income situation has not improved, as prices received have fallen steadily. Led by sizable reductions in livestock prices, seasonally adjusted prices received by Nebraska farmers fell 1.6 percent from their February levels and were down 4.7 percent from March 1979. In sharp contrast, prices paid were 11.5 percent above those of last year.

During the first quarter 1979, economic activity in Nebraska was sluggish. The state physical volume index was 0.6 percent above the fourth quarter of last year and was 0.6 percent lower than the first quarter of last year.

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

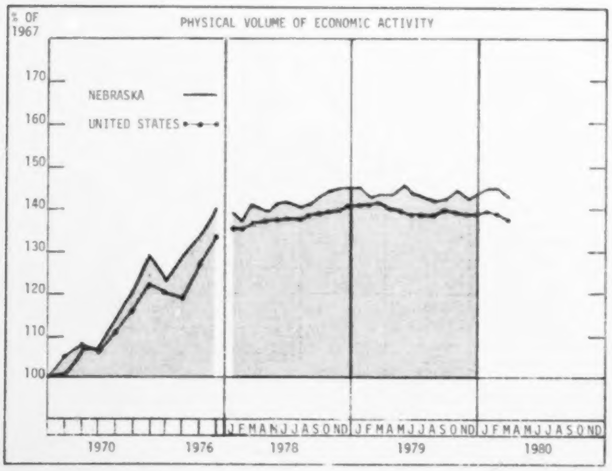
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

March 1980	Current Month as Percent of Same Month Previous Year		1980 Year to Date as Percent of 1979 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	108.6	110.4	110.4	111.5
Agricultural	116.5	100.1	112.8	104.2
Nonagricultural	107.5	110.8	110.0	111.7
Construction	77.8	105.7	83.2	112.8
Manufacturing	117.9	115.6	119.4	115.8
Distributive	108.2	109.9	111.2	110.8
Government	101.0	106.8	101.5	106.8
Physical Volume	98.3	98.0	99.5	98.9
Agricultural	122.3	105.3	112.2	105.8
Nonagricultural	95.6	97.8	98.0	98.7
Construction	71.2	96.7	75.6	102.6
Manufacturing	103.7	99.7	104.7	99.9
Distributive	94.3	95.8	97.4	97.0
Government	96.4	102.2	97.0	101.8

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	332.3	315.6
Agricultural	322.8	297.5
Nonagricultural	333.5	316.2
Construction	236.7	304.9
Manufacturing	364.0	293.1
Distributive	343.4	334.1
Government	301.6	299.7
Physical Volume	142.9	137.9
Agricultural	134.5	128.8
Nonagricultural	144.1	138.2
Construction	83.9	108.1
Manufacturing	173.0	137.2
Distributive	143.2	139.3
Government	138.0	147.5

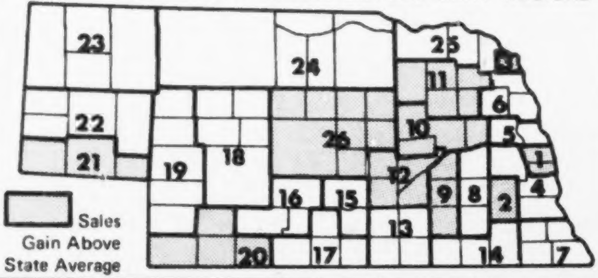


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number and City	City Sales*	Sales in Region*	
	March 1980 as percent of March 1979	March 1980 as percent of March 1979	Year to date'80 as percent of Year to date'79
The State	89.4	87.6	93.0
1 Omaha	94.8	93.6	92.6
Bellevue	111.6		
2 Lincoln	90.5	89.6	92.3
3 So. Sioux City	89.5	88.3	92.6
4 Nebraska City	90.3	79.0	85.0
5 Fremont	92.8	90.8	88.1
Blair	99.7		
6 West Point	81.5	80.8	88.1
7 Falls City	93.7	84.8	90.1
8 Seward	95.3	89.0	90.6
9 York	92.6	89.0	92.6
10 Columbus	89.4	86.7	98.1
11 Norfolk	92.2	89.8	93.6
Wayne	119.8		
12 Grand Island	88.9	87.8	92.7
13 Hastings	89.7	86.7	91.5
14 Beatrice	92.9	87.7	91.7
Fairbury	84.4		
15 Kearney	86.6	87.1	90.9
16 Lexington	89.9	85.1	89.9
17 Holdrege	94.0	88.5	90.8
18 North Platte	87.9	85.1	87.6
19 Ogallala	66.3	86.6	90.0
20 McCook	90.7	92.3	92.8
21 Sidney	93.1	97.9	93.4
Kimball	113.2		
22 Scottsbluff/Gering	87.4	85.9	90.9
23 Alliance	93.3	86.4	88.7
Chadron	79.8		
24 O'Neill	94.4	82.7	87.8
25 Hartington	94.0	84.9	90.1
26 Broken Bow	95.5	89.7	96.7

*State totals include sales not allocated to cities or regions. The year-to-year ratios for city and region sales may be misleading because of changes in the portion of unallocated sales. Region totals include, and city totals exclude, motor vehicle sales. Sales are those on which sales taxes are collected by retailers located in the state. Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

This softness was shared by all sectors of the economy, with only the manufacturing and agricultural sectors registering growth. The weakness in the Nebraska economy has been concentrated in the construction industry and retail sales, especially motor vehicle sales.

Nationally, first-quarter Gross National Product data indicate that there was some growth in the economy, but most economists expect the national economy to enter a recession in the second quarter of 1980. It is expected that the recession will last until mid-1981.

One of the few bright spots in the Nebraska economy was the 1.0 percent growth in employment in March 1980, compared to March 1979. Even though employment continued to grow on a year-to-year basis, the rate of growth has been slowing recently and may reflect the weakening position of the Nebraska economy. The March gain in employment represented nearly 7,500 persons, but was insufficient to offset the growth of the labor force and resulted in an increase in the number of unemployed. March's unemployment rate of 3.5 percent, however, was among the lowest in the nation and compares favorably to the national rate of 6.6 percent. Twenty-one of the twenty-six reporting cities registered gains in employment in March. All regions of the state shared in the employment growth.

March was a particularly poor month for retail sales in Nebraska. After adjustment for price changes, net taxable sales were 12.4 percent below those of last March. Nationally, retail sales also exhibited considerable softness and were down 6.9 percent from last year. Compared to March 1979, all of the state's twenty-six planning regions recorded decreases in total sales. Nonmotor vehicle sales recorded a somewhat smaller loss (10.6 percent), as all but three of the thirty-two principal trading centers had sales lower than those of last March. Wayne, Kimball, and Bellevue were the only cities with increases.

The weakness in the state's economy in March was reflected in the city business indexes, as twenty-two of the twenty-six reporting cities registered losses relative to March 1979. On the average, the indexes fell 4.4 percent and represented the third consecutive decline. Declines in building activity and retail sales were responsible for this loss and completely overshadowed the moderate gains in employment. Bellevue posted the largest gain in economic activity, with an increase of 4.5 percent. Other communities with March-to-March increases were Falls City, Alliance, and York.

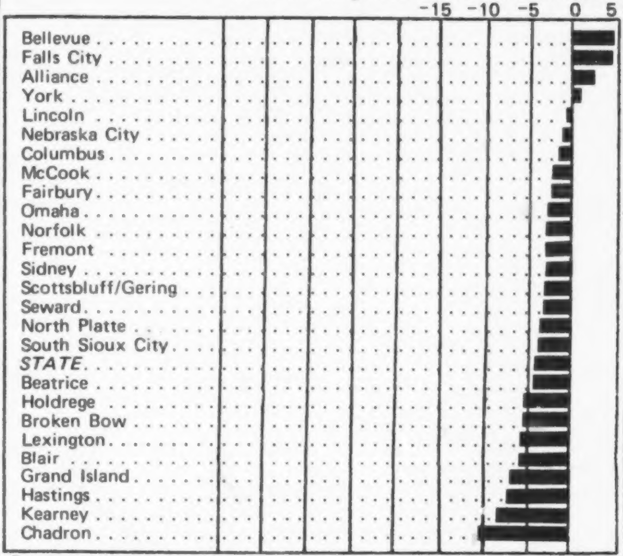
J. A. D.

5. PRICE INDEXES

March 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	239.8	114.7	114.3
Commodity component	228.0	113.7	113.6
Wholesale Prices	261.5	115.4	115.5
Agricultural Prices			
United States	231.0	95.1	98.5
Nebraska	240.0	95.2	100.5

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change March 1979 to March 1980



Source: Table 3 (page 4) and Table 4 below.

4. MARCH CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago: Employment[1]	Building Activity[2]	Power Consumption[3]
The State	102.2	76.8	100.6
Alliance	112.0	72.7	117.1
Beatrice	100.1	70.5	97.8
Bellevue	102.8	83.9	94.6*
Blair	102.2	50.0	67.5
Broken Bow	99.8	55.6	90.3
Chadron	98.8	59.0	106.5
Columbus	103.6	144.6	96.6
Fairbury	99.6	131.4	127.5
Falls City	102.1	336.1	108.3
Fremont	99.9	89.2	101.1*
Grand Island	101.4	51.0	98.4
Hastings	98.9	56.7	98.2
Holdrege	105.4	43.5	85.2
Kearney	102.0	38.1	102.2
Lexington	100.2	79.3	94.9
Lincoln	103.0	136.1	108.9
McCook	103.9	91.4	101.7
Nebraska City	107.9	99.5	98.1
Norfolk	101.5	73.7	106.6
North Platte	103.0	91.8	100.1
Omaha	102.8	63.0	101.5
Scottsbluff/Gering	100.2	94.1	117.3
Seward	101.8	67.1	92.0
Sidney	101.5	84.5	95.6
So. Sioux City	102.9	87.0	95.5
York	101.4	193.7	104.2

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 3)

that effective tax rates per barrel are significantly lower than the rates stated in the Act, an effect due to the adjusted base price concept and the state severance tax adjustment. Also note the progressive nature of the tax until phaseout begins, that is, the effective tax percentage grows over time as the removal price increases. This progressive feature will be present if the removal price of oil increases faster than the GNP deflator, a relationship which is one of the authors' assumptions.

Table 3
EFFECTIVE TAX PERCENTAGES PER BARREL*

Year	Removal Price	Independent Tier 1	Independent Tier 2	Nonindependent Tier 1	Nonindependent Tier 2	New Oil Tier 3
1980	$24.80	18.7%	8.7%	26.1%	17.5%	7.2%
1981	27.74	23.2	11.0	32.4	22.1	8.7
1982	31.02	24.3	11.8	34.0	23.6	9.2
1983	34.70	25.3	12.5	35.4	25.0	9.6
1984	38.80	26.3	13.2	36.9	26.5	10.1
1985	43.40	27.3	13.9	38.2	27.9	10.6
1986	46.62	27.4	14.0	38.4	28.1	10.3
1987	50.09	27.4	14.0	38.4	28.1	10.0
1988	53.81	22.1	11.3	31.0	22.7	7.7
1989	57.81	12.3	6.3	17.2	12.7	4.2
1990	62.10	2.7	1.3	3.8	2.8	0.9
1991	66.71	0.0	0.0	0.0	0.0	0.0

*See note for Table 2.

Table 4
WEIGHTED AFTER-TAX PRICES AND EFFECTIVE TAX PERCENTAGES PER BARREL FOR NEBRASKA OIL*

Year	Removal Price	After-tax Producers' Price	Effective Tax Percentage	After-tax Royalty Holders' Price	Effective Tax Percentage
1980	$24.80	$20.17	18.7%	$19.08	23.1%
1981	27.74	21.30	23.2	19.77	28.7
1982	31.02	23.45	24.4	21.64	30.2
1983	34.70	25.86	25.5	23.75	31.6
1984	38.80	28.48	26.6	26.01	33.0
1985	43.40	31.41	27.6	28.53	34.3
1986	46.62	33.68	27.8	30.56	34.4
1987	50.09	36.20	27.7	32.85	34.4
1988	53.81	41.77	22.4	38.87	27.8
1989	57.81	50.62	12.4	48.88	15.4
1990	62.10	60.42	2.7	60.01	3.4
1991	66.71	66.71	0.0	66.71	0.0

*See note for Table 2.

Table 2 can also be used to obtain an aggregate after-tax price for all oil by applying a set of production weights to the after-tax prices of each oil type in the table. Table 4 shows the weighted after-tax prices per barrel and effective tax percentages, using Nebraska's 1979 production in each production category as weights and assuming no change in these weights during the period of the tax's application. The weights may indeed shift over time but no attempt is made to forecast such shifts.

The weights used are:

Independent Tier 1	Independent Tier 2	Nonindependent Tier 1	Nonindependent Tier 2	New Tier 3
.3853	.1746	.3305	.0519	.0577

For example, the weighted after-tax price obtained by producers in 1980 for Nebraska oil can be found using the following formula:

Producer Price = .3853 ($24.80 - 4.63) + .1746 ($24.80 - 2.16)
+ . . . + .0577 ($24.80 - 1.78)
= $20.17 per barrel

Thus, on average, a producer who sells oil directly from the well will stand to lose $4.63 per barrel via the tax in 1980 ($24.80 - 20.17) and the effective tax percentage is 18.7 percent (4.63/24.80).

A weighted after-tax price for royalty holders can also be calculated. The Act stipulates that royalty holders will be taxed at the same rate as the nonindependent producers. Thus, the production weights presented above under Tier One oil for independent and nonindependent producers must be combined, as are those under Tier Two. The royalty holders' weighted after-tax price per barrel for 1980 is found via the formula:

Royalty Price = .7158 ($24.80 - 6.48) + .2265 ($24.80 - 4.33)
+.0577 ($24.80 - 1.78)
= $19.08 per barrel.

On average, the holders of royalty interests in Nebraska oil can expect to lose $5.72 per barrel in 1980, and the effective tax percentage is 23.1 percent.

JAMES R. SCHMIDT and LARRY A. GRAUS*

---

*Dr. Schmidt is Assistant Professor of Economics and Research Associate, Bureau of Business Research. Mr. Graus is a Research Assistant in the Bureau of Business Research and recently received the M.A. degree in economics.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research
Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 430 July 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

U 7860-1 UA rec'd 8/11/80

UNL News

Vol. 60 No. 2 August 1980 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

RETAIL TRADE IN NEBRASKA, 1967-1977

While the dollar volume of retail sales per establishment has increased, the number of retail establishments has decreased over the interval 1967-1977. These findings are drawn from the 1977 Census of Retail Trade, the latest in a series conducted on a quinquennial basis in years ending in 2 and 7 by the U.S. Department of Commerce, Bureau of the Census.

As part of the 1977 economic censuses, the 1977 Census of Retail Trade surveyed all establishments primarily engaged in selling merchandise for personal or household consumption and providing services associated with the sale of such goods. For most of the very small retail firms, data were obtained from Internal Revenue Service and Social Security Administration records. Questionnaires were sent to medium- and large-size firms, and firms known to operate more than one establishment.

Census results indicate that, in both current and real dollars, retail sales in Nebraska have progressively increased over the past ten years. Table 1 depicts 1967, 1972, and 1977 retail sales for Nebraska by major Standard Industrial Code (SIC) classifications appropriate to the Census of Retail Trade. The real dollar sales figures for 1972 and 1977 in Table 1 have been deflated for price using the commodity price index.

Some caution must be used in interpreting comparative sales statistics for 1967, 1972, and 1977 because there was a modification of the SIC classifications between the 1967 and 1972 Censuses of Retail Trade. As a result, changes occurred in the definitions of some kinds of businesses for 1972 and subsequent retail census reports. After the 1967 Census of Retail Trade, electrical apparatus and equipment, plumbing and hydronic heating supplies, warm air heating and air conditioning, farm machinery and equipment, and farm supplies were classified as wholesale trade rather than retail trade. These SIC reclassifications affected the sales figures for (1) building materials, hardware, garden supply, and mobile home dealers, and (2) miscellaneous retail stores.

As is apparent in Table 1, these two major kinds of businesses were the only ones to register sales losses between 1967 and 1972. These losses can be attributed to the SIC reclassification. All of the other sales figures by kind of business for 1967-1972 register gains, as do all but one of the sales figures for 1972-1977, in real dollars.

Another discrepancy occurs in the sales data reported for the 1972 and 1977 Censuses of Retail Trade. Sales statistics reported as part of 1972 sales and not included

(Continued on page 2)

Table 1
RETAIL SALES BY KIND OF BUSINESS
COMPARATIVE SUMMARY STATISTICS FOR NEBRASKA: 1977, 1972, AND 1967
(in millions)

	Current Dollars					Real Dollars (1967 = Base Year)			
	Sales			% Change		Sales		% Change	
Kind of Business	1977	1972	1967	1972-77	1967-72	1977	1972	1972-77	1967-72
Building materials, hardware, garden supply, and mobile home dealers	356.6	209.4	318.0	70.3	−34.2	204.1	173.2	17.9	−45.5
General merchandise group stores	685.8	449.4	287.6	52.6	56.3	392.5	371.7	5.6	29.3
Food stores	971.9	614.7	477.2	58.1	28.8	556.4	508.5	9.4	6.6
Automotive dealers	1094.0	630.2	424.6	73.6	48.4	626.2	521.2	20.1	22.8
Gasoline service stations	529.8	322.1	229.2	64.5	40.5	303.3	266.4	13.8	16.2
Apparel and accessory stores	235.5	158.0	107.3	49.0	47.3	134.8	130.7	3.1	21.8
Furniture, home furnishings, and equipment stores	261.4	175.8	110.7	48.7	58.8	149.6	145.4	2.9	31.4
Eating and drinking places	474.1	278.9	183.9	70.0	51.6	271.4	230.7	17.6	25.4
Drug and proprietary stores	138.7	108.8	82.1	27.6	32.5	79.4	90.0	−11.7	9.6
Miscellaneous retail stores	397.4	233.4	335.0	70.3	−30.3	227.5	193.0	17.8	−42.4
State total*	5145.3	3180.7	2555.5	61.8	24.5	2945.2	2630.8	12.0	2.9

*Subtotals may not add up to state total due to rounding.

(Continued from page 1)

in 1977 tabulations are (1) sales or other taxes collected from customers, and (2) carrying or other credit charges. This discrepancy, however, does not appear to have affected the picture of consistent growth of retail trade in Nebraska.

For the state as a whole, the largest sales increases between census years occurred from 1972-1977, probably due to the consistency in classification of businesses included as part of the Census of Retail Trade for these census years. In real dollars, sales for the state over the entire ten-year period increased by 15.3 percent. From 1967 to 1977, automotive dealers and eating and drinking places registered the greatest increase in sales (47.5 percent), followed by general merchandise group stores (36.5 percent), furniture, home furnishings, and equipment stores (35.2 percent), gasoline service stations (32.3 percent), apparel and accessory stores (25.6 percent), and food stores (16.6 percent). Types of businesses that registered losses over this ten-year period are building materials, hardware, garden supply, and mobile home dealers (-35.8 percent), miscellaneous retail stores (-32.1 percent), and drug and proprietary stores (-3.2 percent).

At the state level, the number of retail establishments decreased continuously from 1967 to 1977 (Table 2). When considered in conjunction with the increase in total sales over the ten-year period, this suggests that a consolidation of the retail sector is occurring, with fewer stores handling a higher volume of sales. This trend is especially apparent for general merchandise group stores, food stores, gasoline service stations, and eating and drinking places.

For the 1967-1977 decade, the greatest expansion in the number of establishments occurred for furniture, home furnishings, and equipment stores (39.3 percent), automotive dealers (22.0 percent), and apparel and accessory stores (19.2 percent). Seven out of the ten major kinds of businesses listed in Table 2 registered decreases in the number of establishments from 1967-1977. For the five-year interval, 1972 to 1977, the largest decrease in number of establishments occurred for gasoline service stations (-23.5 percent). Many of these stations are privately owned and have a difficult time competing with the company-owned station in times of rising prices, increasing demand, and decreasing supply. Despite the decrease in the number of gasoline service stations, however, their sales increased from 1972-1977. This increase in sales is probably due to the rapidly rising price of gas in both current and real dollars.

Other types of stores which experienced a loss in the number of establishments between 1972 and 1977 are: general merchandise group stores (-13.2 percent), drug and proprietary stores (-7.9 percent), food stores (-7.4 percent), and eating and drinking places (-4.7 percent). Of these four major types of stores, only one—drug and proprietary stores—recorded a corresponding decrease in sales volume from 1972-1977. Although furniture, home furnishings, and equipment stores had a sales increase of only 2.9 percent for the 1972-1977 interval, the number of such stores increased by 21.9 percent during this five-year interval. It will be interesting to note whether the 1982 Census of Retail Trade will reveal any stabilization in the growth of these types of stores.

GEOGRAPHIC DISTRIBUTION OF RETAIL SALES

Counties having the largest and smallest amount of retail sales in the state for 1977 correspond to those counties having the most and least number of retail establishments (Tables 3 and 4). The only county which ranks in the top ten in terms of number of establishments that does not rank in the top ten for amount of sales is Platte County (it ranks eleventh). A very consistent relationship appears to exist between number of retail establishments and retail sales.

Half of the counties comprising the top ten for 1977 retail sales—Douglas, Lancaster, Sarpy, Madison, and Dodge—are located in the eastern part of the state. Four of the counties are spread across central Nebraska—Hall, Lincoln, Buffalo, and Adams, and only one county in the top ten for 1977 sales—Scotts Bluff—is in western Nebraska. In contrast to this trend, the majority of counties listed among those having the least amount of sales in the state are located in the western and west-central portions of Nebraska—Banner, Arthur, McPherson, Logan, Grant, and Sioux counties. These trends are consistent with what would be expected given the distribution of Nebraska's population.

Table 2
NUMBER OF ESTABLISHMENTS BY KIND OF BUSINESS
COMPARATIVE SUMMARY STATISTICS FOR NEBRASKA: 1977, 1972, AND 1967

Kind of Business	Number of Establishments			Percent Change		
	1977	1972	1967	1972-77	1967-72	1967-77
Building materials, hardware, garden supply, and mobile home dealers	1,142	1,090	1,679	4.8	-35.1	-32.0
General merchandise group stores	447	515	652	-13.2	-21.0	-31.4
Food stores	1,422	1,536	1,832	-7.4	-16.2	-22.4
Automotive dealers	1,258	1,129	1,031	11.4	9.5	22.0
Gasoline service stations	1,732	2,265	2,218	-23.5	2.1	-21.9
Apparel and accessory stores	988	907	829	8.9	9.4	19.2
Furniture, home furnishings, and equipment stores	1,191	977	855	21.9	14.3	39.3
Eating and drinking places	3,189	3,347	3,415	-4.7	-2.0	-6.6
Drug and proprietary stores	421	457	558	-7.9	-18.1	-24.6
Miscellaneous retail stores	3,459	3,116	3,838	-11.0	-18.8	-9.9
State total	15,249	15,339	16,907	-0.6	-9.3	-9.8

Among counties in the top ten for amount of sales, shifts occurred in the rankings of certain counties between 1967 and 1977. Although the top three counties—Douglas, Lancaster, and Hall—remained the same, Sarpy County jumped from eleventh place in 1967 to fourth place in 1977. In contrast to this, Dodge County moved from fourth place in 1967 to ninth place in 1977. This change in the distribution of sales may be attributed to population growth in the suburban areas of Omaha. Living (and perhaps working) in the fringe area of Omaha, shoppers will naturally tend to use retail facilities close to their place of residence. Counties comprising the ten having the smallest amount of sales in the state remained relatively constant from 1967-1977.

Adjusted dollar per capita sales for 1977 at the county level are presented in Figure 1 (p. 6). Counties having the lower levels of dollar per capita sales tend to be located in the central and border parts of the state. A low level of dollar per capita sales means that the county is getting a low net return on retail sales in the area. In other words, the people are doing most of their shopping in another county. Most of those counties with a low level of dollar per capita sales—Sioux, Banner, Arthur, McPherson, Logan, Hayes, Frontier, Sherman, Howard, Nance, Dixon, Thurston, and Clay—are adjacent to counties having the larger cities in the region and thus containing retail facilities capable of serving a multicounty area. Twenty-four Nebraska counties—the twenty-three which have per capita sales of $2,000 or more, plus Custer County—rank above the state average dollar per capita sales. As would be expected, most of these counties contain a larger community that is a major retail center in the area.

Another indicator of return on retail sales in an area is sales as a percent of personal income (Figure 2, p. 6). Once again, counties in which sales constitute less than 30 percent of personal income tend to cluster in the central and border areas of the state and to lie adjacent to counties containing larger communities. Thirty-one Nebraska counties have a sales as

(Continued on page 6)

Table 3
RANKING OF COUNTIES WITH MOST
AND LEAST AMOUNT OF SALES, 1977*
(in millions)

COUNTIES WITH MOST SALES

County	Sales	Percent of State Total	1967 Rank
Douglas	893.0	30.3	1
Lancaster	385.7	13.1	2
Hall	120.9	4.1	3
Sarpy	88.6	3.0	11
Scotts Bluff	87.4	3.0	5
Lincoln	82.9	2.8	9
Madison	75.8	2.6	6
Buffalo	75.4	2.6	7
Dodge	74.3	2.5	4
Adams	70.8	2.4	8
		66.4	
Balance of state:		33.6%	

COUNTIES WITH LEAST SALES

County	Sales	Percent of State Total	1967 Rank
Banner	.06	0.002	1
Arthur	.20	0.007	2
McPherson	.24	0.008	3
Loup	.43	0.014	5
Logan	.43	0.015	8
Wheeler	.52	0.018	4
Keya Paha	.63	0.022	9
Grant	.90	0.031	12
Sioux	.91	0.031	7
Blaine	1.10	0.038	11
		0.186	
Balance of state:		99.814%	

---

*1977 figures are deflated dollars (1967 = base year).

Table 4
RANKING OF COUNTIES WITH MOST
AND FEWEST ESTABLISHMENTS, 1977

COUNTIES WITH MOST ESTABLISHMENTS

County	Number	Percent of State Total	1967 Rank
Douglas	2,998	19.7	1
Lancaster	1,400	9.2	2
Hall	512	3.4	3
Scotts Bluff	441	2.9	5
Sarpy	383	2.5	15
Buffalo	383	2.5	7
Dodge	382	2.5	4
Madison	364	2.4	6
Lincoln	355	2.3	8
Platte	319	2.1	9
Adams	311	2.0	9
		51.5	
Balance of state:		48.5%	

COUNTIES WITH FEWEST ESTABLISHMENTS

County	Number	Percent of State Total	1967 Rank
McPherson	4	0.03	3
Banner	5	0.03	2
Arthur	8	0.05	1
Wheeler	8	0.05	4
Logan	9	0.06	7
Loup	9	0.06	8
Blaine	11	0.07	5
Sioux	12	0.08	8
Hayes	14	0.09	6
Keya Paha	16	0.10	10
Grant	18	0.12	9
Hooker	18	0.12	12
Thomas	18	0.12	11
Gosper	21	0.14	11
		1.12	
Balance of state:		98.88%	

Review and Outlook

April was generally a poor month for the Nebraska economy, with declines in most of the major economic indicators for the state. Because cash farm marketings for Nebraska and the United States were unavailable before this article was written, overall indexes and indexes for the agricultural sectors could not be computed.[1] Based upon the physical volume index for the nonagricultural sectors, however, real output for the state fell 0.9 percent from its March level and was 5.3 percent below its value of last year. Comparable national figures indicate losses of 1.4 percent and 3.0 percent, respectively.

The March-to-April loss in nonagricultural activity was broadly based, as all sectors recorded declines. The month-to-month losses for these sectors were distributive, -0.2 percent; government, -0.4 percent; manufacturing, -2.0 percent; and construction, -7.0 percent.

Nonagricultural activity showed definite signs of slipping in April, as its index fell for the fourth consecutive month. During the first three months of 1980 all of the sectors experienced some loss, but April was the first month in which all four nonagricultural sectors declined. So far, with the exception of construction and retail sales, losses have been mild. Evidence at the national level doesn't point to

(Continued on page 5)

---

[1] The chart at the bottom of the page estimates physical volume by using changes in the nonagricultural sectors only and will be revised when cash farm marketings data are available.

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

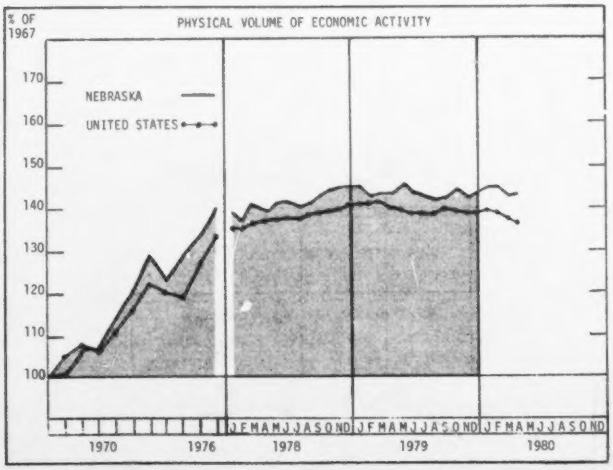
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

April 1980	Current Month as Percent of Same Month Previous Year		1980 Year to Date as Percent of 1979 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	NA	NA	NA	NA
Agricultural	NA	NA	NA	NA
Nonagricultural	106.1	109.3	109.0	111.1
Construction	70.5	102.4	80.0	110.3
Manufacturing	112.7	112.6	117.4	114.9
Distributive	107.9	109.0	110.4	110.4
Government	102.5	105.8	101.9	106.6
Physical Volume	NA	NA	NA	NA
Agricultural	NA	NA	NA	NA
Nonagricultural	94.7	97.0	97.1	98.3
Construction	65.2	94.8	73.0	100.7
Manufacturing	100.2	98.0	103.3	99.4
Distributive	94.1	95.1	96.5	96.6
Government	98.1	103.3	97.4	102.2

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	NA	NA
Agricultural	NA	NA
Nonagricultural	332.3	313.6
Construction	218.6	295.2
Manufacturing	352.8	290.1
Distributive	346.4	331.6
Government	302.9	300.9
Physical Volume	NA	NA
Agricultural	NA	NA
Nonagricultural	142.5	136.3
Construction	78.1	105.4
Manufacturing	167.8	134.9
Distributive	142.8	136.7
Government	138.0	149.6

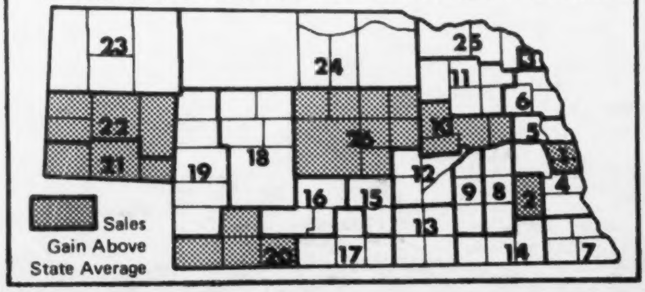


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number[1] and City	City Sales*	Sales in Region*	
	April 1980 as percent of April 1979	April 1980 as percent of April 1979	Year to date'80 as percent of Year to date'79
The State	93.6	89.5	92.0
1 Omaha	95.4	92.2	92.5
Bellevue	96.6		
2 Lincoln	96.8	94.1	92.8
3 So. Sioux City	86.2	76.4	88.1
4 Nebraska City	88.2	81.4	84.0
5 Fremont	84.2	78.5	85.4
Blair	92.6		
6 West Point	77.1	68.6	82.4
7 Falls City	85.0	80.2	87.3
8 Seward	80.1	79.4	87.4
9 York	94.3	81.7	89.5
10 Columbus	86.5	78.9	92.6
11 Norfolk	85.6	76.8	88.9
Wayne	62.9		
12 Grand Island	88.1	80.4	89.1
13 Hastings	92.7	84.7	89.6
14 Beatrice	104.2	85.8	90.1
Fairbury	85.1		
15 Kearney	90.1	85.6	89.4
16 Lexington	88.8	89.2	89.7
17 Holdrege	87.1	83.7	88.9
18 North Platte	84.3	82.3	86.1
19 Ogallala	86.5	88.1	89.4
20 McCook	86.5	86.2	91.0
21 Sidney	105.8	105.4	96.5
Kimball	133.9		
22 Scottsbluff/Gering	98.2	94.2	91.8
23 Alliance	97.0	95.2	90.4
Chadron	101.5		
24 O'Neill	86.1	78.5	85.5
25 Hartington	66.5	70.3	84.5
26 Broken Bow	90.0	76.5	91.1

*State totals include sales not allocated to cities or regions. The year-to-year ratios for city and region sales may be misleading because of changes in the portion of unallocated sales. Region totals include, and city totals exclude, motor vehicle sales. Sales are those on which sales taxes are collected by retailers located in the state. Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

any major revival in construction or retail sales, but it does suggest that the worst declines are over, as falling interest rates have been accompanied with a resurgence in credit-related consumer buying.

Construction has been hardest hit by the current slowdown. Even though this sector has not shown an increase since May 1979, the first four months of 1980 have been especially devastating. Since last May the index has fallen 35.8 percent, with half of this drop occurring during 1980. All segments of the construction industry—residential, non-residential, and non-building—have experienced declines. Compared to April 1979, the number of housing units authorized in Nebraska fell nearly 50 percent.

April employment data show an increase of 0.9 percent (7,000 persons) compared to April 1979. Despite this increase, there are indications of softness in Nebraska's employment situation. Not only was April's increase the smallest year-to-year increase since last May, but there was also a 6,900 person growth in the number of unemployed, pushing the unemployment rate to 3.4 percent. This increase in unemployment was the largest since November 1975. Nebraska's unemployment rate, however, stands well below the U.S. rate of 6.6 percent.

The April growth in employment occurred primarily in the distributive sectors, with services leading the way. The three remaining nonagricultural sectors all recorded declines compared to April 1980, as durable manufacturing, building construction, and local government recorded the greatest losses in their respective sectors. Twenty-one of the twenty-six reporting cities recorded employment gains in April.

Retail sales dropped substantially in April, continuing a trend which began in January. After adjustment for price changes, net taxable sales fell 10.5 percent below those of April 1979. Much of the loss was due to a 27.9 percent decline in motor vehicle sales, but non-motor vehicle sales fell 6.4 percent. Nationally, retail sales were down 6.9 percent from last April. Compared to April 1979, only one of the state's twenty-six planning regions (Region 21) recorded an increase in total sales. In addition, only four of thirty-two principal trading centers in the state had non-motor vehicle sales above those of last March. The cities with increases were Kimball, Sidney, Beatrice, and Chadron.

Relative to April 1979, the city business indexes fell an average of 3.2 percent and represented the fourth consecutive decline. Weakness in retail sales and building activity was responsible for this month's poor showing, as twenty-one of the twenty-six cities registered losses. Alliance posted the largest gain in economic activity, with an increase of 3.2 percent. Other cities with April-to-April increases were Beatrice, Scottsbluff, Lincoln, and Sidney.

J. A. D.

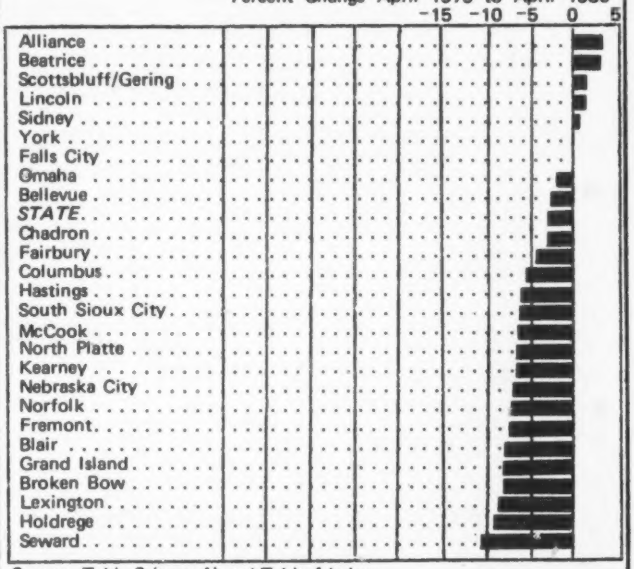
5. PRICE INDEXES

April 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	242.5	114.7	114.4
Commodity component	229.9	113.1	113.5
Wholesale Prices	262.3	114.0	115.2
Agricultural Prices			
United States	NA	NA	NA
Nebraska	NA	NA	NA

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change April 1979 to April 1980



Source: Table 3 (page 4) and Table 4 below.

4. APRIL CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	102.2	72.9	98.8
Alliance	115.1	58.6	107.2
Beatrice	102.8	112.9	96.3
Bellevue	103.5	86.0	78.1
Blair	99.9	44.1	85.9
Broken Bow	101.6	45.2	86.6
Chadron	100.5	33.4	100.3
Columbus	100.7	106.1	95.7
Fairbury	100.1	124.4	102.2
Falls City	102.5	311.5	100.5
Fremont	100.1	72.9	103.6*
Grand Island	100.4	43.9	101.9
Hastings	100.0	49.9	99.5
Holdrege	98.4	46.8	100.2
Kearney	102.0	44.2	98.6
Lexington	99.9	34.3	102.9
Lincoln	104.1	128.3	99.8
McCook	99.9	61.2	111.6
Nebraska City	102.0	54.2	96.7
Norfolk	100.8	70.8	97.5
North Platte	102.8	67.0	102.8
Omaha	103.5	79.0	96.1
Scottsbluff/Gering	100.6	65.8	138.4
Seward	101.8	62.9	90.2
Sidney	100.2	87.1	88.1
So. Sioux City	102.6	79.2	92.0
York	101.5	184.7	90.0

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 3)

a percent of personal income that is higher than the state average. Interestingly, Thomas County has the highest sales as a percent of personal income (82.3 percent), followed closely by Keith (79.2 percent), Sheridan (73.8 percent), and Hall (70.8 percent) counties.

GEOGRAPHIC DISTRIBUTION OF NUMBER OF ESTABLISHMENTS

Although retail sales increased in both current and real dollars from 1967-1977, the number of retail establishments decreased during this time period. Only three of Nebraska's ninety-three counties—Arthur, Hall, and Washington—recorded a continual increase in number of retail establishments from 1967-1972 and 1972-1977. From 1967-1972, sixty-eight counties recorded a decrease in the number of establishments, and from 1972-1977 this number increased to seventy-nine. Over the entire ten-year period, fifty-seven counties experienced a continual decline in the number of establishments.

The ten counties with the most and the ten with the least number of establishments for 1977, and their rank, are listed in Table 4. As would be expected, most of the counties which ranked as having the largest number of retail establishments were also the most populated. Platte is the only county among the top ten in terms of retail establishments that did not rank among the ten most populated (it ranked eleventh), according to the Federal-State Cooperative Program population estimates. Of the counties with the least number of retail establishments, all but Gosper (which ranked seventeenth) also ranked among the fourteen counties having the smallest population.

Counties having the largest number of retail establishments, however, did not necessarily have the greatest rate of increase in number of establishments from 1967 to 1977. Only three of the counties which ranked among the ten having the largest number of retail establishments also ranked among the ten having the fastest rate of growth. The counties, their rank, and growth rates are: Sarpy, second, 69.5 percent; Lancaster, fifth, 10.6 percent; and Hall, ninth, 2.8 percent.

Furthermore, three counties that ranked among the top ten in terms of percentage growth of the number of retail establishments also ranked among the ten counties having the fewest number of retail establishments. These counties, their rank, and growth rates are: Arthur, first, 100.0 percent; Wheeler, fourth, 14.3 percent; and Blaine, sixth, 10.0 percent. Although each of these three counties is estimated to have a population of 1,000 or less and is a small county located in central Nebraska, they have recorded increases in number of establishments and retail sales for the 1967-1977 interval.

Not all of the counties which experienced an increase in the number of retail establishments, however, had a corresponding increase in retail sales. For example, Gosper County recorded a 5.0 percent increase in the number of retail establishments from 1967 to 1977. This gain was offset by a decrease in real dollars in the amount of retail sales (−56.9 percent) between 1967 and 1977. Such a discrepancy may be misleading, given the change in the SIC classification after 1967, and is a good example of the difficulty in assessing trends from these censuses.

A. M. R.

Fig. 1 1977 PER CAPITA SALES (Real Dollars)

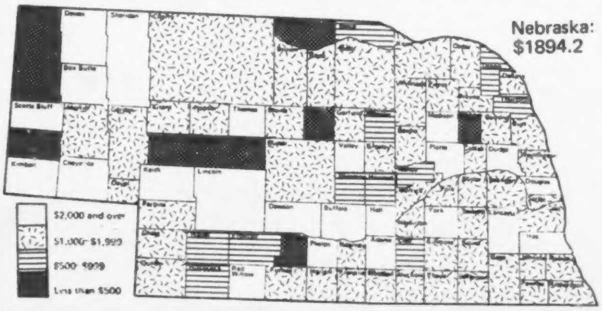
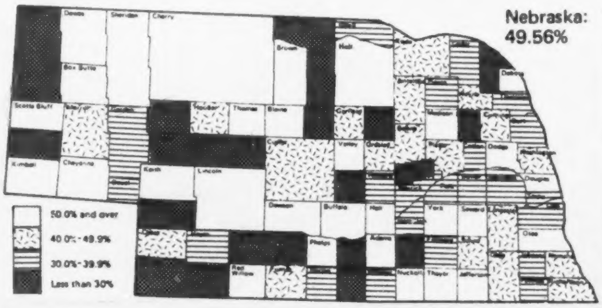


Fig. 2 1977 SALES AS A PERCENT OF PERSONAL INCOME



UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 431 August 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

BEST AVAILABLE COPY

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

/ U 7860-1 UB 9/16/80

UNL News

Vol. 60 No. 5 September 1980 (ISSN 0149-4163)

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska–Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Business in Nebraska

Prepared by the Bureau of Business Research
College of Business Administration

THE NEBRASKA ECONOMY IN RETROSPECT: 1960-1979

During the last twenty years, the Nebraska economy has experienced both growth and transition. The population of the state has grown from 1.412 million inhabitants in 1960 to 1.535 million people in 1979, an increase of 8.7 percent. This growth in population can be translated into growth of economic measures such as personal income, employment, and taxes.

As to the transition referred to, Nebraska is no longer a state whose economy is strictly dominated by agriculture. This statement should not be misinterpreted to imply that agriculture is no longer important to the Nebraska economy. Indeed the opposite is true, and agriculture is still the driving economic force for the state. However, more than 50 percent of the state's population now live in six of Nebraska's ninety-three counties. The principal communities in these six counties can be characterized as centers of manufacturing, trade, finance, government, and education.

Although the nonagricultural industries have gained considerable ground during the last twenty years, it would be a mistake to assume that agriculture has played only a small part in this scenario. It would be difficult, if not impossible, to ignore the effects that agriculture and the nonagricultural industries have had on each other, and because of this strong relationship the Nebraska economy has fared rather well, with historically high labor-force participation rates and low unemployment.

This article will present an analysis of economic growth for Nebraska during the last twenty years. Attention will be focused on changes in gross state product, employment, and personal income, since each of these data series provides a somewhat different profile of the Nebraska economy. The article will also examine the growth of Nebraska gross income tax receipts, comparing the increase to that of personal income. All of the data are presented in tabular form, providing useful information to those who wish to conduct further analyses.

GROSS STATE PRODUCT

Gross state product reflects the net result of economic activity in a state, and is defined as the dollar value of all final goods and services produced by a state's economy during a year. It is usually derived using the gross-product-by-industry approach. In the case of Nebraska, gross product is estimated for each of eight nonagricultural sectors and for the agricultural industry. The sectoral estimates are then aggregated to obtain total gross state product. Using national industry deflators, nonagricultural gross product is computed in constant (real) dollars. The double-deflation technique is used to obtain real gross farm product.

Constant dollar gross Nebraska product has grown from $5,512.3 million in 1960 to $10,401.2 million in 1979, an increase of 88.7 percent. During the same time, real gross national product has increased 94.3 percent (see Table 1). Analysis of average annual percentage changes and compound growth rates indicates that real gross state product has grown at a slightly slower rate than real gross national product. Manufacturing and transportation, communications, and public utilities are the two sectors experiencing the greatest growth, with respective increases in gross product of 165.1 percent and 142.4 percent. From 1960 to 1979, gross product for mining declined 36.8 percent, while the construction sector experienced a slight 10.4 percent increase in gross product.

Average annual percentage changes in real gross product for each industrial sector and the associated standard deviations are presented in Table 2 (page 2). The annual percentage change is a measure of an industry's rate of growth over the twenty-year period, while the standard deviation measures the variability of the annual percentage changes in gross product for each industry. The greater the standard deviation, the greater the variability in the percentage changes. For example, a standard deviation of 20.67 for agriculture is indicative of the industry's volatility, while the relatively small standard deviation

(Continued on page 2)

Table 1
CONSTANT DOLLAR GROSS STATE PRODUCT AND
CONSTANT DOLLAR GROSS NATIONAL PRODUCT
1960-1979
(millions of 1972 dollars)

	Gross State Product	Gross National Product
1960	5,512	736,800
1961	5,484	755,300
1962	5,805	799,100
1963	5,962	830,700
1964	6,039	874,400
1965	6,301	925,900
1966	6,556	981,000
1967	6,838	1,007,700
1968	6,975	1,051,800
1969	7,357	1,078,800
1970	7,433	1,075,300
1971	7,657	1,107,500
1972	8,008	1,171,100
1973	8,346	1,235,000
1974	8,221	1,217,800
1975	8,792	1,202,300
1976	9,256	1,273,000
1977	9,886	1,340,500
1978	10,020	1,399,200
1979	10,401	1,431,700

Source: Bureau of Business Research computations and U.S. Department of Commerce.

(Continued from page 1)

for wholesale and retail trade is a mark of that sector's stability.

With the exception of agriculture, contract construction, government, and mining, each industrial sector of the Nebraska economy has increased its percentage share of real gross state product during the last twenty years. Manufacturing is the industry showing the greatest increase in percentage share of gross state product, capturing 11.51 percent of the share in 1960 and 16.17 percent in 1979. One should not attempt to use the percentage composition of gross state product as a means of determining the relative importance of the sectors, since all of the state's industries are interrelated to varying degrees. For example, it would be virtually impossible to isolate the effects of agriculture on trade or vice versa. Therefore, the methodology used to calculate gross product by industry attempts to eliminate double counting as much as possible. The percentage composition of gross Nebraska product by industry is presented in Table 3.

PERSONAL INCOME

Although personal income does not cover all income or economic activity of an area, it is still a commonly used measure of a state's economic growth. The series comprises the income of households and private nonprofit institutions, and is published both quarterly and annually by the Bureau of Economic Analysis of the U.S. Department of Commerce.

The basic components of personal income are wage and salary disbursements, proprietors income, and other labor income. Personal income by place of residence is obtained by subtracting contributions for social insurance by place of work, and adding dividends, interest, rent, transfer payments, and residence adjustment.

Table 4 presents labor and proprietors income for nine sectors of the Nebraska economy, personal income by place of residence, and per capita personal income, with the data expressed in current dollars. The U.S. Consumer Price Index (CPI) is used to convert nominal personal income to real personal income in 1967 dollars.

During the twenty-year period from 1960 to 1979, personal income for Nebraska increased 361.3 percent. In real terms, personal income has grown from $3,209 million in 1960 to $6,039 million in 1979, a more modest increase of 88.2 percent. Sectoral changes indicate that services and finance, insurance, and real estate have experienced the greatest growth in personal income with increases of 430.6 percent and 392.4 percent, respectively. Personal income for mining and agriculture has grown the least, with respective increases of 150.0 percent and 207.4 percent.

Table 2
AVERAGE ANNUAL PERCENTAGE CHANGES
IN CONSTANT DOLLAR GROSS STATE PRODUCT
BY INDUSTRY 1960-1979

Agriculture	3.62	(20.67)
Contract Construction	0.67	(5.69)
Manufacturing	5.34	(4.12)
Mining	−2.00	(8.77)
Transportation, Communications, and Public Utilities	4.82	(3.47)
Wholesale and Retail Trade	3.87	(1.98)
Finance, Insurance, and Real Estate	4.12	(2.41)
Services	3.76	(2.02)
Government	1.86	(1.93)

Note: Numbers in parentheses are standard deviations.

Per capita personal income is defined as personal income by place of residence divided by total population, and represents the amount of personal income per resident of the state. In 1960, Nebraska per capita personal income was $2,016 and increased to $8,341 by 1979, a growth of 313.7 percent. In terms of real growth, per capita personal income increased from $2,273 to $3,837 during the same twenty-year period, a 68.9 percent growth.

The changes in nominal personal income and per capita personal income are quite large, but can be misleading. Real personal income takes into account the effects of inflation and presents a more realistic view of the state's economic growth. Although personal income has been steadily increasing during the last twenty years, so also has the cost of goods and services. In fact, real personal income for Nebraska declined from $6,044 million in 1978 to $6,039 million in 1979. This was due to the rampaging inflation experienced by the country in 1979.

EMPLOYMENT

During the twenty-year time span considered, nonagricultural wage and salary employment in Nebraska increased 64.5 percent (see Table 5). Industries experiencing the greatest increase in employment are: services, +106.4 percent; finance, insurance, and real estate, +81.0 percent; wholesale and retail trade, +75.2 percent; and government, +62.8 percent. Industries showing the least growth in employment during this time are: manufacturing, +48.4 percent; contract construction, +37.3 percent; transportation, communications, and public utilities, +23.1 percent; and mining, −37.0 percent.

Some sectors of the Nebraska economy are more important in terms of employment than gross state product. Three industries that fit this description are government, services, and wholesale and retail trade. These particular industrial sectors can be described as labor intensive. For example, gross product for the services industry during 1979 was $986.7 million, or 10.8 percent of total nonagricultural gross state product, while services employment accounted for a higher percentage (18.2 percent) of nonagricultural wage and salary employment. On the other hand, gross product for finance, insurance, and real estate represented 18.8 percent of nonagricultural gross state product, while

Table 3
PERCENTAGE COMPOSITION OF
CONSTANT DOLLAR GROSS STATE PRODUCT
BY INDUSTRY FOR SELECTED YEARS

	1960	1965	1970	1975	1979
Agriculture	16.55	13.72	12.95	13.49	12.52
Contract Construction	7.12	6.17	5.28	4.34	4.16
Manufacturing	11.51	13.56	15.61	15.03	16.17
Trans., Comm., and Public Utilities	9.44	9.96	10.09	10.96	12.12
Wholesale and Retail Trade	16.24	16.95	17.24	17.93	17.64
Finance, Insurance, and Real Estate	14.50	15.36	14.69	15.75	16.48
Services	8.91	8.94	9.55	9.60	9.49
Government	14.82	14.71	14.07	12.52	11.12
Mining	0.92	0.62	0.52	0.38	0.31

Note: Totals may not add to 100 due to rounding.

employment for this sector accounted for only 6.5 percent of nonagricultural employment.

To arrive at some method of ranking the state's nonagricultural industries, gross product and employment are used to construct a ratio that will allow for such an ordering. For each industrial sector, gross product is

(Continued on page 6)

Table 4

NEBRASKA PERSONAL INCOME BY INDUSTRY AND PLACE OF RESIDENCE

1960-1979

(millions of dollars)

	Agriculture	Contract Construction	Manufacturing	Mining	Trans., Comm., and Public Utilities	Wholesale and Retail Trade	Finance, Ins., and Real Est.	Services	Government	Personal Income by Place of Residence	Per Capita Personal Income*
1960	349	174	359	16	227	458	132	271	358	2846	2016
1961	286	181	377	16	227	471	140	287	385	2913	2038
1962	400	180	396	14	243	487	150	302	413	3159	2191
1963	360	184	395	13	245	503	157	314	441	3265	2244
1964	285	185	423	12	253	527	169	338	473	3364	2293
1965	465	198	436	12	265	552	176	358	491	3761	2562
1966	542	211	489	12	277	591	184	397	502	4040	2758
1967	447	222	546	12	286	631	198	441	537	4238	2887
1968	389	241	602	12	309	676	215	476	601	4528	3076
1969	567	280	661	13	332	741	231	542	667	5112	3463
1970	498	289	689	13	365	787	244	581	772	5442	3665
1971	548	303	713	10	396	837	270	616	844	5864	3889
1972	754	349	795	14	445	904	299	676	908	6638	4344
1973	1271	391	881	17	506	1020	321	755	979	7834	5110
1974	656	430	979	30	572	1150	345	853	1066	8009	5211
1975	1094	442	998	26	598	1267	384	955	1181	9087	5885
1976	491	524	1146	31	697	1391	450	1054	1290	9401	6057
1977	617	569	1244	31	771	1488	517	1128	1382	10382	6677
1978	1007	633	1404	34	853	1609	585	1279	1510	11809	7546
1979	1073	651	1605	40	1007	1805	650	1438	1613	13129	8341

*Per capita personal income is given in dollars.

Source: U.S. Department of Commerce.

Table 5

NEBRASKA NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT BY INDUSTRY

1960-1979

(thousands)

	Contract Construction	Manufacturing	Mining	Trans., Comm., and Public Utilities	Wholesale and Retail Trade	Finance, Ins., and Real Est.	Services	Government
1960	24.4	66.8	2.7	37.6	93.6	22.6	55.4	78.0
1961	24.6	66.6	2.7	36.6	95.6	23.3	57.3	80.7
1962	24.0	67.9	2.3	36.6	97.2	24.0	59.0	82.4
1963	24.7	66.5	2.1	36.8	98.3	24.4	61.2	84.7
1964	23.4	67.5	1.9	36.3	100.2	24.9	65.8	86.0
1965	23.7	69.0	2.0	36.1	103.0	25.5	67.3	89.3
1966	23.7	75.1	1.9	36.5	108.1	26.0	70.0	90.0
1967	23.6	80.1	1.7	36.4	110.2	26.2	74.1	94.2
1968	23.8	83.2	1.6	36.7	114.1	26.9	76.0	94.0
1969	25.2	86.7	1.7	36.7	117.3	27.9	79.1	97.3
1970	24.6	85.0	1.6	37.2	120.8	29.0	82.9	101.0
1971	23.9	83.0	1.6	37.3	122.1	29.6	85.9	105.2
1972	26.9	85.1	1.6	36.9	133.6	30.6	88.0	114.3
1973	29.2	90.5	1.6	38.5	138.8	32.3	93.4	116.9
1974	29.8	93.4	1.8	39.8	143.9	33.6	98.5	121.4
1975	28.1	85.1	1.6	38.7	144.7	34.4	100.2	124.7
1976	30.3	87.8	1.7	40.6	150.7	35.7	100.4	124.8
1977	32.3	90.6	1.8	42.0	156.0	37.7	104.1	129.2
1978	33.0	94.0	1.8	43.8	158.9	39.5	108.8	130.2
1979	33.5	99.1	1.7	46.3	164.0	40.9	114.3	127.0

Source: Nebraska Department of Labor.

Review and Outlook

The level of economic activity in Nebraska dropped in May 1980, with four of the five sectors recording losses when compared to April. The physical volume index for the state fell 1.9 percent from its April level and was 3.9 percent below its value of last year. Nationally, the index fell 1.1 percent from April and was down 3.1 percent from May 1979.

The April-to-May decrease for Nebraska was broadly based, with decreases in both the agricultural and nonagricultural sectors. The index for the agricultural sector fell 8.9 percent, and the composite index for the nonagricultural sectors fell 0.7 percent. Government, with an increase of 0.9 percent, was the only sector registering a gain. The month-to-month losses for the remaining sectors were: construction, −7.3 percent; manufacturing, −1.5 percent; and distributive, −0.4 percent.

It appears that the Nebraska economy has been affected by the slowdown in the national economy during the first half of 1980. The physical volume index for the state is at its lowest level since August 1978, and nonagricultural output has dropped steadily, as all four of the nonagricultural sectors are below their output levels at the beginning of 1980. Moreover, first-quarter data indicate that real personal income in Nebraska may have dropped slightly from the fourth quarter 1979.

With the exception of retail sales and construction, however, the weak areas in the national economy are relatively less important in Nebraska. On the other hand,

(Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

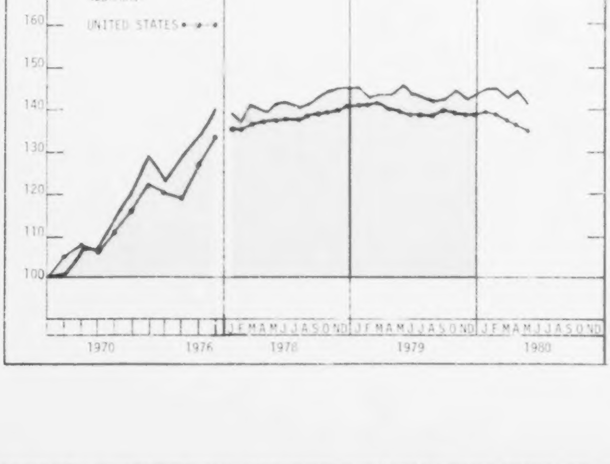
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

May 1980 Indicator	Current Month as Percent of Same Month Previous Year Nebraska	 U.S.	1980 Year to Date as Percent of 1979 Year to Date Nebraska	 U.S.
Dollar Volume	104.9	108.4	108.6	110.5
Agricultural	107.4	103.1	112.7	104.2
Nonagricultural	104.5	108.6	108.1	110.7
Construction	63.1	98.0	76.4	109.3
Manufacturing	111.6	111.3	116.3	114.2
Distributive	106.1	108.7	109.4	110.1
Government	104.0	106.9	102.6	106.6
Physical Volume	96.1	96.9	98.6	98.2
Agricultural	118.0	111.5	117.7	108.8
Nonagricultural	93.5	96.4	96.3	97.9
Construction	57.6	89.5	68.7	98.1
Manufacturing	99.1	97.1	102.6	99.0
Distributive	92.8	95.0	95.7	96.3
Government	99.6	102.8	98.1	102.3

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average Nebraska	 U.S.
Dollar Volume	330.1	313.6
Agricultural	311.4	313.3
Nonagricultural	332.8	313.6
Construction	203.3	290.9
Manufacturing	351.2	288.4
Distributive	347.3	332.3
Government	311.0	303.4
Physical Volume	141.4	135.3
Agricultural	140.3	142.4
Nonagricultural	141.5	135.0
Construction	70.1	100.3
Manufacturing	166.0	133.4
Distributive	141.8	135.7
Government	141.1	149.1

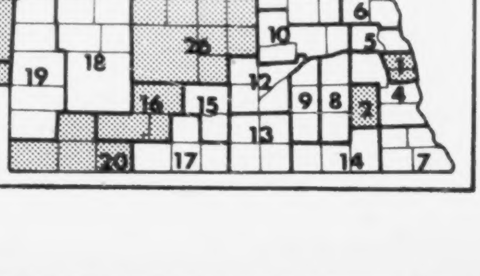


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number and City	City Sales* May 1980 as percent of May 1979	Sales in Region* May 1980 as percent of May 1979	 Year to date'80 as percent of Year to date'79
The State	91.3	87.2	91.0
1 Omaha	88.0	85.4	90.8
Bellevue	93.4		
2 Lincoln	88.9	86.3	91.3
3 So. Sioux City	91.6	90.3	88.6
4 Nebraska City	90.2	80.3	83.2
5 Fremont	83.4	78.4	83.8
Blair	84.3		
6 West Point	89.2	73.3	80.5
7 Falls City	86.1	82.4	86.2
8 Seward	82.8	77.8	85.4
9 York	89.6	79.6	87.4
10 Columbus	81.5	74.7	88.6
11 Norfolk	84.0	78.2	86.5
Wayne	83.0		
12 Grand Island	79.2	77.4	86.4
13 Hastings	87.9	83.6	88.3
14 Beatrice	85.8	80.8	88.0
Fairbury	81.8		
15 Kearney	84.9	80.6	87.4
16 Lexington	87.5	86.8	89.1
17 Holdrege	90.1	82.7	87.5
18 North Platte	82.3	80.8	84.9
19 Ogallala	89.6	76.7	86.3
20 McCook	95.1	88.5	90.4
21 Sidney	99.3	98.6	96.9
Kimball	110.8		
22 Scottsbluff/Gering	93.5	84.4	90.1
23 Alliance	103.1	94.5	91.2
Chadron	98.8		
24 O'Neill	91.1	86.2	85.6
25 Hartington	81.1	75.8	82.6
26 Broken Bow	87.9	83.5	89.4

*State totals include sales not allocated to cities or regions. The year-to-year ratios for city and region sales may be misleading because of changes in the portion of unallocated sales. Region totals include, and city totals exclude, motor vehicle sales. Sales are those on which sales taxes are collected by retailers located in the state. Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



▨ Sales Gain Above State Average

(Continued from page 4)

depressed agriculture prices, coupled with lower yields in 1980, will cause net farm income to decline considerably below the levels of 1979.

Although seasonally adjusted prices received by Nebraska farmers increased 1.8 percent from their April levels, prices have suffered from five consecutive monthly declines and remain 9.0 percent below last May.

The outlook for the Nebraska economy remains hazy. At the national level, it was reported that domestic auto sales improved and new housing starts began to pick up in June. If this carries over to the Nebraska economy, the declines in sales and construction may moderate in June and end later in the year. But unless increases in agricultural prices can be sustained, lower farm income will exert a downward influence on the Nebraska economy.

Although employment in Nebraska continued to grow in May, it appears that employment has been affected by the slowdown. The number of employed increased by 2,400 persons (0.3 percent) compared to May 1979, but, at the same time, there was an increase of 7,700 persons (38.5 percent) in unemployment. This is a continuation of the recent trend in which successively smaller year-to-year increases in employment have been accompanied by successively larger increases in unemployment.

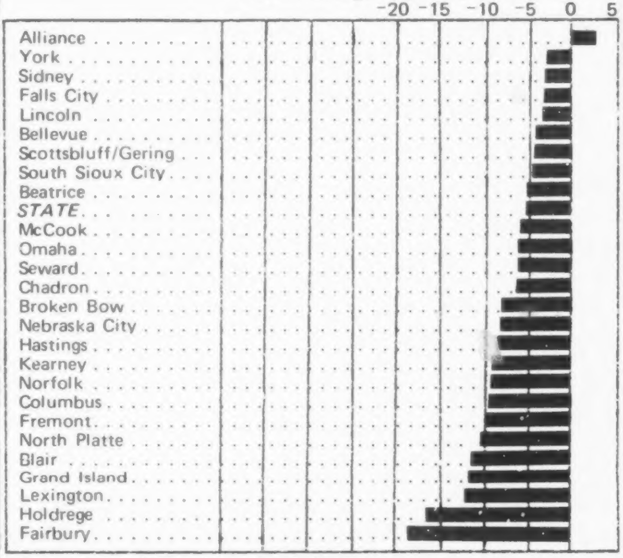
The weakness in employment is underscored by the fact that May's growth resulted from increases in the distributive sector while the remaining sectors all lost employment. The growth in two of this sector's components (services and transportation, communications, and utilities) is a long-term trend which is unlikely to be altered by the current slowdown. It is not surprising, then, that the growth in employment occurred primarily in the state's trading centers, as twenty-one of these twenty-six cities recorded employment gains in May.

In May, retail sales dropped for the fifth consecutive month. Net taxable sales fell 12.8 percent below those of May 1979, after adjustment for price changes. Although non-motor vehicle sales were down 8.7 percent, much of the loss resulted from a 40.9 percent decline in motor vehicle sales. At the national level, retail sales decreased 8.6 percent from last May. Sales were down in all of the state's twenty-six planning regions. Moreover, non-motor vehicle sales were up in only two trading centers, Kimball and Alliance, compared to May 1979.

May's weakness in the state economy was reflected in the city business indexes, with twenty-five of the twenty-six cities registering losses relative to May 1979. The indexes fell an average of 5.8 percent as the moderate gains in employment were overshadowed by the substantial losses in retail sales and building activity. Alliance recorded the only gain in activity, with an increase of 2.6 percent.

J. A. D.

CITY BUSINESS INDEXES
Percent Change May 1979 to May 1980



Source: Table 3 (page 4) and Table 4 below.

4. MAY CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago		
	Employment[1]	Building Activity[2]	Power Consumption[3]
The State	101.5	61.0	92.1
Alliance	111.9	52.2	94.1
Beatrice	102.7	115.5	83.1
Bellevue	101.6	78.9	84.0
Blair	99.4	42.1	88.7
Broken Bow	101.1	57.1	88.2
Chadron	101.8	36.9	75.2
Columbus	100.4	70.6	91.3
Fairbury	100.2	11.6	82.7
Falls City	102.9	137.4	94.2
Fremont	99.9	44.4	102.4*
Grand Island	101.4	42.3	98.2
Hastings	100.4	54.5	84.9
Holdrege	97.9	14.3	68.3
Kearney	102.2	50.3	91.1
Lexington	99.4	22.2	94.5
Lincoln	102.5	102.3	95.5
McCook	100.0	38.6	98.5
Nebraska City	101.9	34.3	94.6
Norfolk	100.9	53.0	95.1
North Platte	101.9	41.6	93.2
Omaha	101.6	72.0	91.6
Scottsbluff/Gering	100.7	56.6	99.5
Seward	100.3	84.3	110.4
Sidney	100.5	81.5	74.2
So. Sioux City	102.7	70.5	88.8
York	101.4	129.5	93.7

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

5. PRICE INDEXES

May 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	244.9	114.4	114.4
Commodity component	231.4	112.4	113.3
Wholesale Prices	263.7	113.7	114.9
Agricultural Prices			
United States	220.0	92.4	95.9
Nebraska	222.0	91.0	96.1

*Using arithmetic average of monthly indexes.
Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

(Continued from page 3)

divided by employment to obtain output per employee in real dollars. The greater the ratio, the greater the amount of output attributed to each employee of an industry. Low output-per-worker figures for some of the sectors are related to a relatively low wage rate. The ratios and the respective rankings for Nebraska's nonagricultural industries are presented below:

Sector	Output/Employee (thousands of 1972 $)
(1) Finance, Insurance, and Real Estate	41.90
(2) Transportation, Communications, and Public Utilities	27.23
(3) Mining	18.82
(4) Manufacturing	16.97
(5) Contract Construction	12.93
(6) Wholesale and Retail Trade	11.19
(7) Government	9.10
(8) Services	8.63

STATE INCOME TAX RECEIPTS

Of interest during this era of tax revolts and surplus general fund balances is a comparison of personal income and state income tax receipts for Nebraska. Gross tax receipts data from the Nebraska Department of Revenue and personal income data from the Bureau of Economic Analysis are presented below for the years 1970 through 1979:

	Nebraska Gross Income Tax Receipts (millions of $)	Nebraska Personal Income (millions of $)
1970	64.2	5,442
1971	63.7	5,864
1972	88.1	6,638
1973	113.8	7,834
1974	112.0	8,009
1975	116.4	9,087
1976	159.9	9,401
1977	217.8	10,382
1978	225.6	11,809
1979	275.4	13,129

State income tax receipts have grown from $64.2 million in 1970 to $275.4 million in 1979, an increase of 329.0 percent for the ten-year period. During the same time, personal income has increased 141.3 percent. It is obvious that the growth of gross state income taxes has far outpaced the growth of personal income. Part of this phenomenon can be explained by the increases in the state income tax rate. However, most of the imbalance in growth is due to inflation, which has pushed Nebraska taxpayers into higher and higher federal tax brackets. Because the Nebraska income tax rate is applied directly to an individual's federal income tax bill, more federal income taxes paid means more income tax receipts flowing into the state's coffers.

CONCLUSION

The preceding segments of this article have attempted to provide a brief quantitative review of growth and change in the Nebraska economy during the decades of the sixties and seventies. As the nation enters the final twenty years of the present century, inflation combined with a severe economic recession provides a somewhat pessimistic outlook for the future. Eventual recovery and continued economic growth will depend on this nation's ability to reduce effectively its dependence on foreign energy supplies, improve productivity, and compete successfully with foreign manufacturers. These problems are not insurmountable, but can be solved only with a combined effort of business and government.

C. L. B.

NEBRASKA ECONOMICS AND BUSINESS ASSOCIATION

The Nebraska Economics and Business Association (NEBA) is an organization whose members have a common interest in economic issues and the economic progress of Nebraska. Members from the business and financial community, from government, and from the academic institutions of Nebraska meet at least once each year to discuss issues of current significance, to participate in a program with theoretical, applied, and professional elements, and to become better acquainted.

The NEBA meeting for 1980 is scheduled for November 14 at the Lincoln, Nebraska, Hilton Hotel, beginning at noon with lunch and a speaker. After lunch, each participant may choose a small group session whose papers and discussion are of interest. The day is capped by a social period and featured dinner speaker. The NEBA meetings run concurrently with the Nebraska Council on Economic Education sessions.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 432 September 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

E KIANKA 270238
CONGRESSIONAL INFO SERVIC BR
SRI ACQUISITIONS
7101 WISCONSIN AVE
WASHINGTON, DC 20014

U7860-1 UA 10/15/80

UNL News

Vol. 60 No. 8 October 1980 (ISSN 0149-4163)

Business in Nebraska

Published once in June and July, twice in May and Aug., 3 times in Jan., Feb., Sept., Oct., Nov., and Dec., 4 times in April, and 5 times in March by the University of Nebraska-Lincoln, Dept. of Publications Services & Control, 209 Nebraska Hall, Lincoln, NE 68588. Second-class postage paid Lincoln, Nebraska.

Prepared by the Bureau of Business Research
College of Business Administration

ADVANCE 1980 POPULATION

Advance 1980 census results for Nebraska indicate a state population of 1,538,788. According to this total, the state would have gained 53,455 people for a 3.6 percent increase, 1970-1980. This advance state total means that Nebraska's population grew at about half the rate expected nationally. While data are not available for the United States, it is expected that total U.S. population will be up 7 to 8 percent over the decade.

It is important to indicate that data reported in this article are based upon 1980 advance census totals. Within a few weeks the Bureau of the Census will release preliminary 1980 census results for Nebraska and these will differ from the results reported here. After additional checking and verification, final counts will be released sometime in 1981 and these final figures can also be expected to differ from the results contained in this report. It is even possible, because of recording errors or other errors in data processing, that some counties may have substantially different population totals from that now available. While county totals may differ by large amounts, primarily because the unit is small in relation to the state, it is not anticipated that Nebraska's final 1980 total will deviate substantially from information reported below.

Despite the uncertainty over the 1980 totals, this advance information is reviewed because of the pressing need of some agencies for more recent information than provided by the 1970 census. *Users should be warned, however, that final totals will be changed and it is up to the users not to misuse these advance data.*

The information presented in Table 1 and Figures 1 and 2 (pp. 2 and 3) outlines the major shifts in Nebraska's population during the 1970s. Population increase was concentrated in the metropolitan regions of the state, along the Platte Valley, in the north central part of the state, and in the northwest. Large county population increases were recorded in Box Butte County, 33.0 percent; Sarpy County, 28.1 percent; Dakota County, 22.6 percent; Lincoln County, 21.2 percent; Madison County, 13.5 percent; Chase County, 13.4 percent; Stanton and Washington counties, 12.5 percent; Lancaster County, 11.3 percent; Dawson County, 10.4 percent; and Hall County, 11.2 percent. Lancaster County's 18,989-person increase led all counties in terms of absolute increase, just nosing out Sarpy County which had an estimated 18,600-person increase in population during the 1970s.

It will take years to discern thoroughly (if we ever master the results) all of the demographic changes that took place during the 1970s. A preliminary analysis of advance 1980 census data reveals a few new trends and a continuation of established trends.

Among the new trends, it is significant to note that a number of counties reversed a persistent, long-term tendency to lose population. Counties recording their first population increase in fifty years or more include Loup (1910), Blaine, York, Wheeler, and Colfax (1920), and Chase, Morrill, Sheridan, Perkins, and Stanton (1930). Some of these increases are quite small, and it is possible that the census review process will alter the counts and change gains to losses and vice versa. Most of the increases are expected to stand under the review scrutiny, making the decade of the 1970s the first growth period for these counties in half a century. The psychological impact of becoming a growing county after decades of losing population is likely to be more important than the gain in numbers.

Also among the new trends are a group of counties which recorded their first increase since 1940. This second group includes Brown, Rock, and Holt counties (see Figure 1).

The presence of water and its role in reversing 40- or 50-year population declines cannot be ignored. In the southwestern part of the state, Keith, Perkins, and Chase counties have had high rates of pivot adoption during the 1970s. In the north central part of the state, Brown, Rock, and Holt counties have had similar increases in acres under irrigation, with the center pivot technology playing an important role in this irrigation. Sandhills counties experiencing an increase in population during the 1970s include Hooker, Thomas, Blaine, and Loup counties, and in all cases the gain in 1970 reversed persistent decreases in population. There is considerably less irrigation in these sandhills counties than in the north central or the southwestern portion of Nebraska. The populations of the sandhills counties are extremely small, and the increases here may be related to the fact that decades of outmigration from Nebraska's rural areas have reached an equilibrium position. Demographic stability is an important element associated with an area's economic and social stability and thus stabilization must be viewed as a positive development.

Another of the new trends in the state's population base would include the growth recorded in the northwest. Box Butte County led all counties with a 33 percent increase in population over the interval 1970-1980. Much of this growth in Box Butte's population was attributable to the growth of Alliance as a result of the Burlington and Northern development in that area. Scotts Bluff, Morrill, and Sheridan counties also recorded population increases, and to some extent these latter three counties are growing probably as a result of the development in Alliance and due to local economic development.

Perhaps the most surprising new development in the state's demographic base is the fact that

(Continued on page 6)

Table 1

1980 ADVANCE CENSUS COUNTS AND 1970 FINAL CENSUS RESULTS

Regions and Counties	1980	1970 Census	Absolute Change '70-'80	Percent Change '70-'80
Region 1	473,745	455,655	18,090	4.0
Douglas	388,945	389,455	-510	-0.1
Sarpy	84,800	66,200	18,600	28.1
Region 2	186,961	167,972	18,989	11.3
Lancaster	186,961	167,972	18,989	11.3
Region 3	16,108	13,137	2,971	22.6
Dakota	16,108	13,137	2,971	22.6
Region 4	53,264	50,670	2,594	5.1
Cass	20,005	18,076	1,929	10.7
Otoe	14,801	15,576	-775	-5.0
Saunders	18,458	17,018	1,440	8.5
Region 5	48,094	48,092	2	0.0
Dodge	33,121	34,782	-1,661	-4.8
Washington	14,973	13,310	1,663	12.5
Region 6	26,658	28,223	-1,565	-5.5
Burt	8,614	9,247	-633	-6.8
Cuming	11,621	12,034	-413	-3.4
Thurston	6,423	6,942	-519	-7.5
Region 7	28,160	31,469	-3,309	-10.5
Johnson	5,035	5,743	-708	-12.3
Nemaha	8,098	8,976	-878	-9.8
Pawnee	3,863	4,473	-610	-13.6
Richardson	11,164	12,277	-1,113	-9.1
Region 8	37,656	36,730	926	2.5
Butler	9,075	9,461	-386	-4.1
Saline	12,985	12,809	176	1.4
Seward	15,596	14,460	1,136	7.9
Region 9	28,769	28,290	479	1.7
Fillmore	7,688	8,137	-449	-5.5
Polk	6,338	6,468	-130	-2.0
York	14,743	13,685	1,058	7.7
Region 10	50,794	49,374	1,420	2.9
Boone	7,383	8,190	-807	-9.9
Colfax	9,823	9,498	325	3.4
Nance	4,746	5,142	-396	-7.7
Platte	28,842	26,544	2,298	8.7
Region 11	64,182	61,100	3,082	5.0
Antelope	8,688	9,047	-359	-4.0
Madison	31,109	27,402	3,707	13.5
Pierce	8,289	8,493	-204	-2.4
Stanton	6,480	5,758	722	12.5
Wayne	9,616	10,400	-784	-7.5
Region 12	72,542	67,276	5,266	7.8
Hall	47,651	42,851	4,800	11.2
Hamilton	9,226	8,867	359	4.0
Howard	6,719	6,807	-88	-1.3
Merrick	8,946	8,751	195	2.2
Region 13	50,367	51,619	-1,252	-2.4
Adams	30,643	30,553	90	0.3
Clay	8,124	8,266	-142	-1.7
Nuckolls	6,738	7,404	-666	-9.0
Webster	4,862	5,396	-534	-9.9
Region 14	41,270	43,946	-2,676	-6.1
Gage	24,299	25,731	-1,432	-5.6
Jefferson	9,712	10,436	-724	-6.9
Thayer	7,259	7,779	-520	-6.7
Region 15	41,770	37,929	3,841	10.1
Buffalo	34,757	31,222	3,535	11.3
Kearney	7,013	6,707	306	4.6
Region 16	27,461	25,931	1,530	5.9
Dawson	21,821	19,771	2,050	10.4
Frontier	3,572	3,982	-410	-10.3
Gosper	2,068	2,178	-110	-5.1
Region 17	24,755	25,373	-618	-2.4
Franklin	4,366	4,566	-200	-4.4
Furnas	6,408	6,897	-489	-7.1
Harlan	4,268	4,357	-89	-2.0
Phelps	9,713	9,553	160	1.7
Region 18	39,292	33,045	6,247	18.9
Hooker	977	939	38	4.0
Lincoln	35,800	29,538	6,262	21.2
Logan	971	991	-20	-2.0
McPherson	587	623	-36	-5.8
Thomas	957	954	3	0.3
Region 19	18,725	17,664	1,061	6.0
Arthur	504	606	-102	-16.8
Chase	4,681	4,129	552	13.4
Grant	864	1,019	-155	-15.2
Keith	9,076	8,487	589	6.9
Perkins	3,600	3,423	177	5.2
Region 20	20,554	20,698	-144	-0.7
Dundy	2,805	2,926	-121	-4.1
Hayes	1,354	1,530	-176	-11.5
Hitchcock	4,041	4,051	-10	-0.2
Red Willow	12,354	12,191	163	1.3
Region 21	17,142	19,504	-2,362	-12.1
Cheyenne	9,909	10,778	-869	-8.1
Deuel	2,441	2,717	-276	-10.2
Kimball	4,792	6,009	-1,217	-20.3
Region 22	46,509	46,208	301	0.7
Banner	832	1,034	-202	-19.5
Garden	2,780	2,929	-149	-5.1
Morrill	5,932	5,813	119	2.0
Scotts Bluff	36,965	36,432	533	1.5
Region 23	31,733	29,174	2.559	8.8
Box Butte	13,423	10,094	3,329	33.0
Dawes	9,418	9,761	-343	-3.5
Sheridan	7,507	7,285	222	3.0
Sioux	1,385	2,034	-649	-31.9
Region 24	31,135	31,123	12	0.0
Boyd	3,321	3,752	-431	-11.5
Brown	4,035	4,021	14	0.3
Cherry	6,639	6,846	-207	-3.0
Holt	13,543	12,933	610	4.7
Keya Paha	1,266	1,340	-74	-5.5
Rock	2,331	2,231	100	4.5
Region 25	29,137	31,368	-2,231	-7.1
Cedar	11,095	12,192	-1,097	-9.0
Dixon	6,934	7,453	-519	-7.0
Knox	11,108	11,723	-615	-5.2
Region 26	32,005	33,763	-1,758	-5.2
Blaine	857	847	10	1.2
Custer	13,575	14,092	-517	-3.7
Garfield	2,359	2,411	-52	-2.2
Greeley	3,448	4,000	-552	-13.8
Loup	860	854	6	0.7
Sherman	4,219	4,725	-506	10.7
Valley	5,631	5,783	-152	-2.6
Wheeler	1,056	1,051	5	0.5
State Total	1,538,788	1,485,333	53,455	3.6

Figure 1
COUNTIES THAT GAINED OR LOST POPULATION
1970-1980

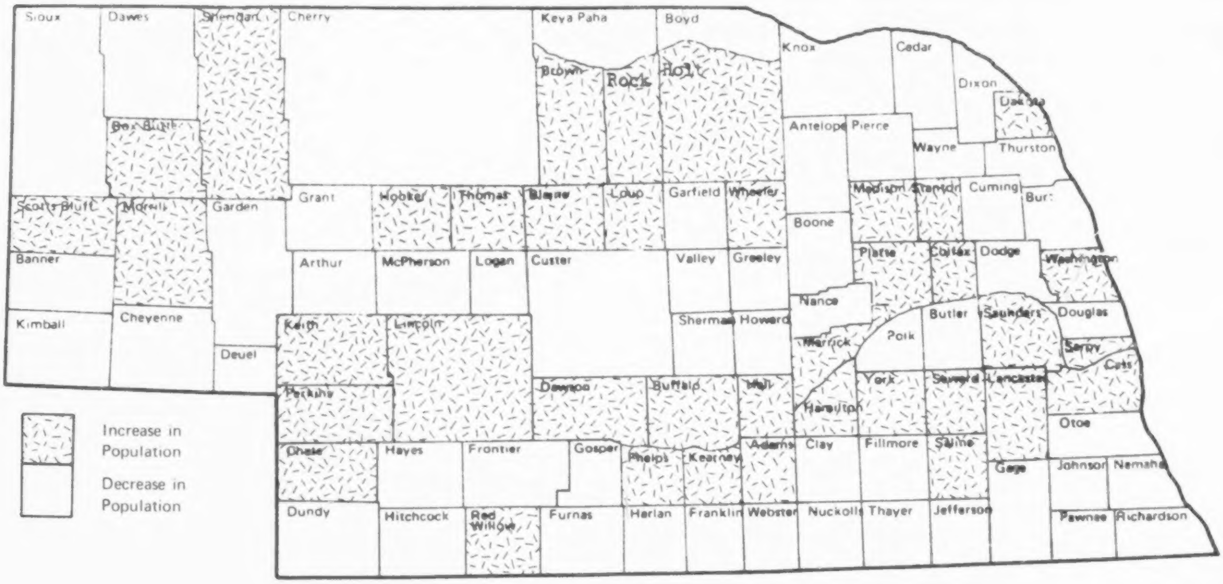
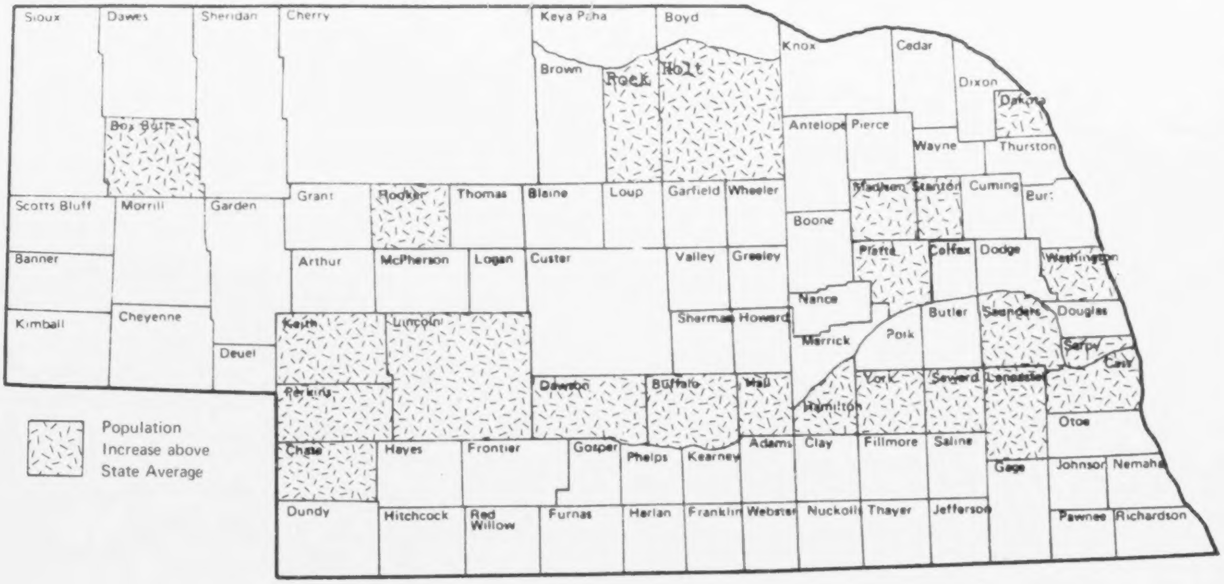

Sioux
Dawes
Sheridan
Cherry
Keya Paha
Boyd
Knox
Cedar
Dixon
Dakota
Brown
Rock
Holt
Box Butte
Antelope
Pierce
Wayne
Thurston
Scotts Bluff
Morrill
Garden
Grant
Hooker
Thomas
Blaine
Loup
Garfield
Wheeler
Madison
Stanton
Cuming
Burt
Boone
Banner
Arthur
McPherson
Logan
Custer
Valley
Greeley
Platte
Colfax
Dodge
Washington
Nance
Kimball
Cheyenne
Deuel
Keith
Lincoln
Sherman
Howard
Butler
Saunders
Douglas
Merrick
Polk
Sarpy
Cass
Perkins
Dawson
Buffalo
Hall
York
Seward
Lancaster
Hamilton
Otoe
Chase
Hayes
Frontier
Gosper
Phelps
Kearney
Adams
Clay
Fillmore
Saline
Gage
Johnson
Nemaha
Dundy
Hitchcock
Red Willow
Furnas
Harlan
Franklin
Webster
Nuckolls
Thayer
Jefferson
Pawnee
Richardson
Increase in Population
Decrease in Population

Figure 2
1970-1980 POPULATION CHANGE ABOVE STATE AVERAGE
BY COUNTY


Sioux
Dawes
Sheridan
Cherry
Keya Paha
Boyd
Knox
Cedar
Dixon
Dakota
Brown
Rock
Holt
Box Butte
Antelope
Pierce
Wayne
Thurston
Scotts Bluff
Morrill
Garden
Grant
Hooker
Thomas
Blaine
Loup
Garfield
Wheeler
Madison
Stanton
Cuming
Burt
Boone
Banner
Arthur
McPherson
Logan
Custer
Valley
Greeley
Platte
Colfax
Dodge
Washington
Nance
Kimball
Cheyenne
Deuel
Keith
Lincoln
Sherman
Howard
Butler
Saunders
Douglas
Merrick
Polk
Sarpy
Cass
Perkins
Dawson
Buffalo
Hall
York
Seward
Lancaster
Hamilton
Otoe
Chase
Hayes
Frontier
Gosper
Phelps
Kearney
Adams
Clay
Fillmore
Saline
Gage
Johnson
Nemaha
Dundy
Hitchcock
Red Willow
Furnas
Harlan
Franklin
Webster
Nuckolls
Thayer
Jefferson
Pawnee
Richardson
Population Increase above State Average

Review and Outlook

The condition of the Nebraska economy continued to weaken in June, with declines in most of the major economic indicators for the state. The physical volume index for the state was 2.8 percent below its value of May and fell 6.2 percent from its level of June 1979. The comparable index for the United States fell 0.7 percent from May and was down 4.2 percent from last year.

This month's decline in economic activity was felt throughout the Nebraska economy, with only the government sector showing an increase in activity. Both the agricultural and nonagricultural indexes fell during the month, as agricultural activity declined 5.3 percent and the index for the nonagricultural sectors decreased 2.4 percent. The May-to-June changes for the four nonagricultural sectors were: government, +0.5 percent; construction, -0.3 percent; manufacturing, -1.8 percent; and distributive, -3.4 percent.

June marked the end of the second quarter of 1980, and was accompanied by the persistent symptoms of an economic slowdown for the state and the nation. The Bureau's physical volume index for Nebraska showed considerable softness during the second quarter, 1980. The index fell 2.3 percent when compared to the first quarter of 1980. This lackluster performance was shared by all sectors of the economy, with only the agricultural and government sectors registering quarterly growth. Activity in the manufacturing and distributive sectors was down moderately, but losses were severe in the construction sector.

At the national level, developments (Continued on page 5)

Notes for Tables 1 and 2: (1) The "distributive" indicator represents a composite of wholesale and retail trade; transportation, communication and utilities; finance, insurance, and real estate; and selected services. (2) The "physical volume" indicator and its components represent the dollar volume indicator and its components adjusted for price changes using appropriate price indexes—see Table 5, page 5.

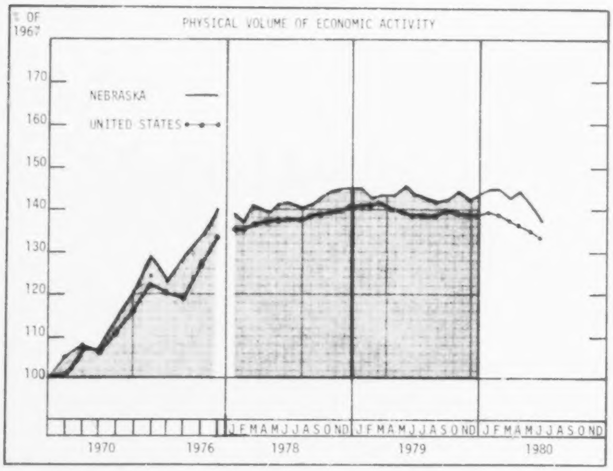
ECONOMIC INDICATORS: NEBRASKA AND UNITED STATES

1. CHANGE FROM PREVIOUS YEAR

June 1980	Current Month as Percent of Same Month Previous Year		1980 Year to Date as Percent of 1979 Year to Date	
Indicator	Nebraska	U.S.	Nebraska	U.S.
Dollar Volume	102.8	107.4	107.6	109.8
Agricultural	104.7	105.6	111.3	104.5
Nonagricultural	102.6	107.5	107.1	109.9
Construction	65.4	95.3	74.5	107.0
Manufacturing	109.8	106.9	115.3	112.1
Distributive	103.4	108.9	108.4	109.9
Government	103.2	107.1	102.6	106.8
Physical Volume	93.8	95.8	97.8	97.6
Agricultural	111.1	111.2	116.5	109.2
Nonagricultural	91.7	95.3	95.5	97.3
Construction	58.9	85.9	67.0	96.1
Manufacturing	97.4	93.4	101.8	97.2
Distributive	90.5	95.3	94.8	96.1
Government	98.8	102.5	98.1	102.3

2. CHANGE FROM 1967

Indicator	Percent of 1967 Average	
	Nebraska	U.S.
Dollar Volume	324.4	313.0
Agricultural	307.0	330.1
Nonagricultural	326.8	312.4
Construction	205.6	286.3
Manufacturing	347.1	278.7
Distributive	338.3	335.5
Government	312.1	305.1
Physical Volume	137.2	133.6
Agricultural	132.9	146.1
Nonagricultural	137.8	133.2
Construction	69.7	97.0
Manufacturing	163.1	128.2
Distributive	136.6	135.5
Government	141.0	149.1

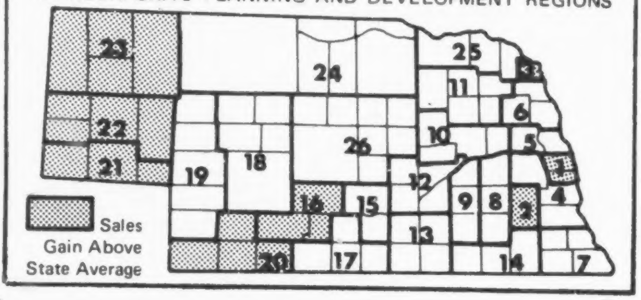


3. NET TAXABLE RETAIL SALES OF NEBRASKA REGIONS AND CITIES (Adjusted for Price Changes)

Region Number and City	City Sales*	Sales in Region*	
	June 1980 as percent of June 1979	June 1980 as percent of June 1979	Year to date'80 as percent of Year to date'79
The State	83.2	81.3	89.2
1 Omaha	87.1	83.6	89.6
Bellevue	63.1		
2 Lincoln	86.1	84.6	90.2
3 So. Sioux City	83.5	82.6	87.5
4 Nebraska City	70.3	77.6	82.2
5 Fremont	74.9	75.4	82.3
Blair	79.4		
6 West Point	86.6	71.5	78.9
7 Falls City	83.1	79.9	85.1
8 Seward	76.7	75.5	83.6
9 York	84.9	77.6	85.5
10 Columbus	73.2	72.3	85.6
11 Norfolk	74.5	73.5	84.2
Wayne	91.7		
12 Grand Island	86.5	83.7	85.9
13 Hastings	77.0	79.0	86.6
14 Beatrice	82.5	78.9	86.3
Fairbury	81.3		
15 Kearney	74.4	77.4	85.5
16 Lexington	90.8	81.5	87.7
17 Holdrege	89.2	84.0	86.8
18 North Platte	73.6	72.2	82.4
19 Ogallala	73.6	78.5	84.7
20 McCook	78.5	81.7	88.6
21 Sidney	84.4	91.2	95.8
Kimball	119.8		
22 Scottsbluff/Gering	98.4	92.2	90.5
23 Alliance	85.5	83.2	89.7
Chadron	75.5		
24 O'Neill	82.4	75.8	83.6
25 Hartington	85.0	76.7	81.6
26 Broken Bow	87.5	74.4	86.4

*State totals include sales not allocated to cities or regions. The year-to-year ratios for city and region sales may be misleading because of changes in the portion of unallocated sales. Region totals include, and city totals exclude, motor vehicle sales. Sales are those on which sales taxes are collected by retailers located in the state. Compiled from data provided by Nebraska Department of Revenue.

1980 YEAR TO DATE AS PERCENT OF 1979 YEAR TO DATE IN NEBRASKA'S PLANNING AND DEVELOPMENT REGIONS



(Continued from page 4)

were similar to those in Nebraska, with some differences in the magnitude of the changes. Overall, the second-quarter physical volume index for the United States was down 3.1 percent from the first quarter.

June was the weakest month of the quarter for the Nebraska economy. With the exception of construction, the sectors either recorded their largest declines or smallest increases during this month. This may be an indication that the economy is rapidly approaching its low point and will level off or begin to turn around later in the year. It is encouraging to note that June's drop in construction was the smallest monthly decline since May 1979. Many economists have begun to suggest that prospects for a reversal of the current national downtrend are getting better. This may carry over to some of the sectors of the Nebraska economy, but overall improvement in Nebraska will depend to a larger extent on developments in farm income.

In June, employment fell 0.9 percent (7,300 persons) compared to June 1979. At the same time, unemployment increased by nearly 7,000 persons, pushing the unemployment rate to its yearly high of 4.2 percent. The decline in employment was the first in more than a year and was the culmination of a trend begun earlier this year during which the gains in employment had become successively smaller. Construction and manufacturing experienced the largest losses in employment, while the distributive sector continued to post gains. The weakness in employment was reflected in Nebraska's cities, as only four of the twenty-six reporting cities registered gains over last year.

Retail sales fell for the sixth consecutive month in June. Net taxable sales were down 18.7 percent from those of June 1979, after adjustment for price changes. This was the largest year-to-year drop in sales since the Bureau started to keep records of net taxable sales in 1972. Non-motor vehicle sales were down 16.8 percent, while motor vehicle sales declined 33.1 percent. Nationally, retail sales were down 6.1 percent compared to last June. The extent of the decline in sales for Nebraska is evidenced by the fact that sales were down in all of the state's twenty-six planning regions. In addition, non-motor vehicle sales decreased in all but one of the thirty-two principal trading centers. Kimball reported an increase of 19.8 percent.

Relative to June 1979, all of the twenty-six cities registered losses in business activity. The city business indexes fell an average of 9.7 percent. Scottsbluff/Gering and Alliance were the only cities with declines of less than 5 percent. J. A. D.

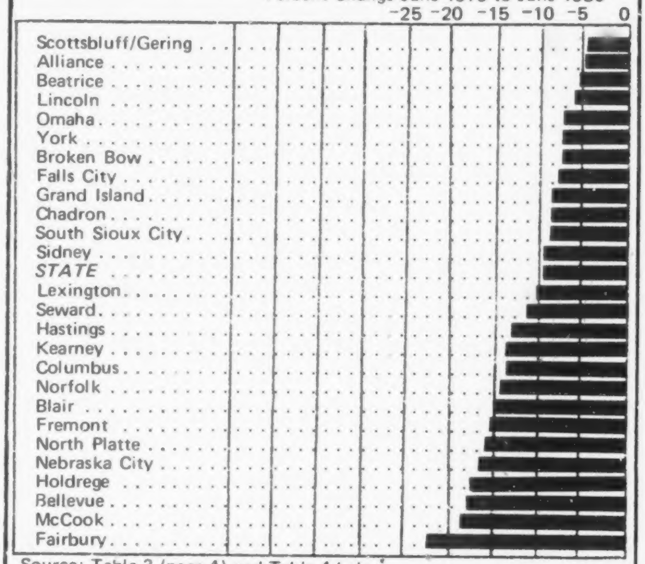
5. PRICE INDEXES

June 1980	Index (1967 = 100)	Percent of Same Month Last Year	Year to Date as Percent of Same Period Last Year*
Consumer Prices	247.6	114.3	114.4
Commodity component	232.8	111.7	113.0
Wholesale Prices	265.2	113.6	114.6
Agricultural Prices			
United States	226.0	95.0	95.7
Nebraska	231.0	94.3	95.8

*Using arithmetic average of monthly indexes.

Sources: Consumer and Wholesale Prices: U.S. Bureau of Labor Statistics; Agricultural Prices: U.S. Department of Agriculture.

CITY BUSINESS INDEXES
Percent Change June 1979 to June 1980



Source: Table 3 (page 4) and Table 4 below.

4. JUNE CITY BUSINESS INDICATORS

The State and Its Trading Centers	Percent of Same Month a Year Ago: Employment[1]	Building Activity[2]	Power Consumption[3]
The State	99.5	57.0	97.1
Alliance	107.0	68.0	98.0
Beatrice	105.0	95.4	99.2
Bellevue	100.0	61.7	90.5
Blair	97.2	43.4	80.1
Broken Bow	99.2	68.4	96.3
Chadron	97.6	46.5	154.8
Columbus	97.4	63.8	103.7
Fairbury	97.9	5.2	89.2
Falls City	100.2	67.7	107.8
Fremont	97.7	37.0	99.5*
Grand Island	99.3	61.4	92.4
Hastings	98.5	49.8	99.3
Holdrege	98.6	12.7	64.6
Kearney	99.3	54.1	98.8
Lexington	96.9	24.7	107.8
Lincoln	101.2	78.3	100.1
McCook	97.7	29.0	66.6
Nebraska City	98.6	37.3	99.5
Norfolk	98.1	47.2	97.8
North Platte	99.3	37.7	92.4
Omaha	100.0	63.9	99.0
Scottsbluff/Gering	98.3	56.4	94.1
Seward	97.6	84.2	95.8
Sidney	98.3	70.7	88.7
So. Sioux City	99.9	70.6	95.0
York	98.7	99.6	93.1

[1] As a proxy for city employment, total employment for the county in which a city is located is used.

[2] Building Activity is the value of building permits issued as spread over an appropriate time period of construction. The U.S. Department of Commerce Composite Construction Cost Index is used to adjust construction activity for price changes.

[3] Power Consumption is a combined index of consumption of electricity and natural gas except in cases marked * for which only one is used.

Source: Compilation by Bureau of Business Research from reports of private and public agencies.

(Continued from page 1)

population decreased in Douglas County. If this advance total becomes final, it would be the first decade since 1900 that Douglas County failed to record an increase in population. Following the drought of the 1890s, Douglas County population declined by nearly 16,000 from the 1890 total. Thereafter, Douglas County population increased with each decennial census. Advance 1980 census results show that Nebraska's most populous county had 388,945 inhabitants.

Population growth in the Platte Valley continued as it has for the past three decades. Growth in the northeastern part of Nebraska centered around Madison, Stanton, Platte, and Colfax counties is undoubtedly related to the continued prosperity and development in the Norfolk region.

Among continuing trends, note that—with the exception of Red Willow—all counties on the Kansas border lost population during the 1970s. This is a continuation of a well-established trend for counties on the Kansas border to lose inhabitants. This group of counties includes those where population has declined since 1900. While nearly all these border counties have steadily lost population since 1900, there are instances where this loss extends on into the second tier of counties from the Kansas border. The reasons for this population decline are complex and varied, but it seems important to remember that southeastern and southern Nebraska were among the first areas to be settled. Since agriculture was the dominant industry at the time of settlement, small farms could be expected to give rise to a large net outmigration of people during the 1950s, 1960s, and 1970s as farm size increased.

After reviewing the advance 1980 census results, Nebraska's population growth seems linked to transportation systems and water. Interstate 80 runs through or in close proximity to most of the counties recording population increases during the 1970s. The availability of water is another common characteristic in many counties experiencing population growth, although this availability varies substantially among the counties. Note that growth in the western part of the state is associated with the development of the Burlington and Northern line which again is transportation related. While there are undoubtedly many complex factors explaining population growth in Nebraska during the 1970s, transportation and water were common features.

Past out-migration patterns are another factor that seems important in the switch of some counties from losers to gainers during the 1970s. It must be recalled that substantial movement of persons out of agriculture during the 1950s and the 1960s, and to a lesser extent the 1970s, resulted in cohort disappearances of up to 80 percent in some rural Nebraska counties. For instance, during the 1950s and the 1960s, the 10-14 cohort sometimes was reduced substantially as the next census frequently revealed the 20-24 cohort to have been only 25 percent of the original size. In some rural Nebraska counties, population movement off the farm was so complete as to substantially exhaust excess human resources in agriculture. Consequently, near zero population growth, a population equilibrium of sorts, could be expected to develop in parts of the state. This past out-migration was undoubtedly important in stabilizing population in areas of the state.

D. E. P.

1980 CENSUS INFORMATION

The Bureau of Business Research will provide 1980 census information as released on a fee basis. First releases will contain only head counts, with later releases providing detailed information on sex, age structure, and data for small areas, that is, subcounty regions. Detailed information will likely not be made available from the Bureau of the Census until 1981.

Information on the social and economic characteristics of the population, the sample information from the 1980 census, for counties and subcounties units will be made available by the Bureau of Business Research as released on computer tape from the Bureau of the Census. The release of the social economic data will likely not occur until after mid-1981 or later.

The Bureau of Business Research has compiled county population totals from 1860 through the advance 1980 data. This information is available for $5.00. Prepayment on all orders under $25 is requested.

UNL News

BUSINESS IN NEBRASKA
PREPARED BY BUREAU OF BUSINESS RESEARCH
Member, Association for University Business & Economic Research

Business in Nebraska is issued monthly as a public service and mailed free within the State upon request to 200 CBA, University of Nebraska–Lincoln 68588. Material herein may be reproduced with proper credit.

No. 433 October 1980

UNIVERSITY OF NEBRASKA-LINCOLN
Roy A. Young, *Chancellor*
COLLEGE OF BUSINESS ADMINISTRATION
Gary Schwendiman, *Dean*

BUREAU OF BUSINESS RESEARCH
Donald E. Pursell, *Director*
Charles L. Bare, *Statistician*
Jerome A. Deichert, *Research Associate*
Anne M. Ralston, *Research Associate*
James R. Schmidt, *Research Associate*
Jean T. Keefe, *Editorial Assistant*

The University of Nebraska–Lincoln does not discriminate in its academic, admissions, or employment programs and abides by all federal regulations pertaining to same.

Publications Services & Control
University of Nebraska–Lincoln
Nebraska Hall—City Campus
Lincoln, Nebraska 68588

CONGRESSIONAL INFO SERVIC270188
7101 WISCONSIN AVENUE   BR
WASHINGTON, DC 20014